

A few years ago I came across one of those insights into human behaviour which immediately explains what was previously ill understood. It was a handbook for couriers produced by a travel company which brought thousands of Americans to Britain. According to the courier who showed it to me it was a distillation of accumulated wisdom about how to deal with the travelling public.

The first instruction read as follows: "Begin by introducing yourself. Then introduce the driver by name. Stress that he is a very safe driver." I realized that this kind of confidence-boosting ritual must be followed, no matter what the circumstances, some years later when I arrived in Majorca. "I'd like to introduce Juan," intoned the courier obediently, "Juan is a very safe driver who will be taking you to your hotel".

Juan was nothing of the sort. He was a farscinating psychopath, reeking of raw lighter fuel, or whatever passes for house wine in those parts, who specialized in doing wheelies on the edges of coastal cliffs.

He also looked sideways, conversing with the courier, throughout the trip, presumably following the route via an especially sensitive left ear.

The rest of the handbook was equally illuminating, designed to placate, hoodwink or jolly along nervous punters. It was cleverly unobtrusive, a nice antidote to the "customers are scum" philosophy perfected by airline stewards and a number of bus drivers in my native city, Sheffield, but it was a con trick nevertheless.

The principal message was, "Even if there is a disaster, always smile at your clients, it inspires their confidence". A final instruction, should some crowd of wealthy Americans find themselves in an especially sleazy hotel or restaurant, stated, "As a last resort you can always capitalize on nostalgia. Remember, many Americans come to Britain to rediscover the past".

It was only when I read the Department of Education and Science consultation document *National Curriculum 5-16*, that I realized this valuable couriers' handbook must have fallen into the hands of Mr Bun the Baker. If you think about it, he is implementing its instructions to the letter: stress that everything is going well, even if it



TED WRAGG

Time travel

'It is as if curriculum development in the past 30 years had never existed'

isn't; keep smiling under all circumstances; if all else fails resort to nostalgia.

I suppose if you are a nice liberal chap who wants to be Prime Minister, but find that all the shots are being called by the awful Miss Piggy, the choice is between laughing and crying. She intervenes at a level of detail with which no recent Prime Minister has bothered, decreeing that there shall be an enquiry into A level but it must not change things, determining the handling of the teachers' dispute, releasing education into the commercial market, or trying to limit the role of HM Inspectorate. In the circumstances I shall be grateful if the national curriculum avoids having 30 per cent election in it.

The consultation document is essentially a bureaucratic and political paper which ignores professional advice. It has its origins in one of the worst DES papers ever produced, *A Framework for the Curriculum*, which postulated 10 per cent maths, 10 per cent chicken plucking and so on, and which, you will recall, coincided with the great national toilet roll famine, so that later editions were obligingly sold ready perforated.

Over the years the Inspectorate, various local authorities and numerous heads and teachers, have produced infinitely better conceptions of what is needed, than this list of subjects I did when I was at school in the 1950s. It is as if curriculum development in

the past 30 years had never existed.

Before anyone claims the prize for finding the one reluctant reference to anything faintly smacking of the 1980s, I can tell you that TVEI is grudgingly mentioned in one line on page 11. There is also part of a paragraph on children with special needs, because some wizard has spotted that five years of French may not be the best experience for someone unable to speak English.

That is really the size of it - dilettante, ill-informed, amateurish, backward instead of forward-looking, ignorant of the subtleties of classroom process in its obsession with content, and devoid of professional advice. Indeed the Inspectorate's counsel has been ignored, and there was considerable resistance in the DES to the staff inspector even being on assessor to the science working group.

That is why, in these hugh-or-ery times, I have decided to follow the third piece of advice in that inestimable couriers' handbook, and found a new company which will boldly go even further back in time.

We at Nostalgia National Curricula Inc. will not pussyfoot around in the 1950s or 1930s. So all aboard and let me introduce Ken, our smiling driver. Ken is a very safe driver and he will be driving us to Distraction, our first destination.

One means of distracting anyone from concern about the miserable level of re-

sources in many schools is to stress the blame on to teachers. Victorian railways offer a marvellous model. Following the national tests, children were divided into three classes. The first class carriages are for those who are especially fit under stopwatch conditions. They go into 4 BAT (Brilliant At Tests), 5 BAT (Good At Tests) and the rest in 4 TAT (Terrible At Tests). There will be a cattle truck for TFFT (Two Fingers To Tests). It will contain a few heads and teachers.

Our next destination is Mediaeval Britain from which we will be choosing exciting new subjects. First, 10 per cent of the curriculum will be devoted to alchemy. With luck 4 TAT will discover how to turn base metals into gold, thereby eliminating the national debt at a stroke.

Second, we shall restore Leechcraft, a medicine used to be called in the good old days. This will form a cost-effective health education programme for the proletariat, and, since sticking a leech on someone's bum is fairly cheap, save the health service fortune.

Finally 20 per cent of the curriculum will be devoted to necromancy. Communication with the departed will be an excellent practical way of teaching history. Moreover, that it will enable 4 BAT to tell us what that distant rumbling sound is the sound of the R A Butler turning in his grave.

NEXT WEEK

Labour force

Barry Hugill reports from the Labour Party conference on Jack Straw's first public outing as education spokesman

Home service

Parents are spending millions on out-of-school activities in the three Rs

Aids threat

Nick Baker plays a play for teenagers

Extra: Mathematics

THE TIMES Educational Supplement

FRIDAY OCTOBER 2 1987 NUMBER 3719

FIRST PUBLISHED 1910 PRICE 80p



That's my boy: the former terror of Australian cricketers, Frank "Typhoon" Tyson took up a new teaching post in Staffordshire this term. Profile, page 7.

Exam boards worried by 'conflicting' test plans

by Ian Nash and Linda Blackburne

Senior officials of the GCSE examining boards have expressed grave doubts about the possibility of meeting Government objectives for the testing of pupils at 7, 11 and 14.

They voiced their concern at the first annual conference of the Joint Council for the GCSE which last weekend called for the testing aims to be clarified and feasibility assessed before pressing ahead with legislation.

The fact that the GCSE boards stand in a considerable business front demands to moderate teachers' assessment underlines the gravity of their task. The Northern Examining Board, for example, says it expects at least one million new customers.

"We need to be sure what the purposes of the tests are," said a Joint Council spokesman. "We have had conflicting information from ministers who, on the one hand, say they are diagnostic and, on the other, claim they are to measure achievement. They cannot have both."

GCSE board members are examining, assessing and moderating the Joint Council expects to be involved in all talks with the Government, he said.

Some members of the Joint Council and examining groups are far from

convinced that it will be possible to produce reliable and valid means of carrying out assessment and testing of younger pupils in the way that seems to be intended by the Government.

Mr Dennis Hatfield, chairman of the Joint Council, said: "The council wishes to ensure that neither human nor financial resources are wasted before the feasibility is established."

Meanwhile, responses to the Government's proposed national curriculum have begun to swamp the Department of Education and Science.

The Muslim Educational Trust, one of many bodies to criticize the national curriculum, for example, says it is

News Focus, page 16

curriculum consultation document, wants the right to withdraw their children from art, drama and music lessons because they violate the teaching of Islam.

The MET says the proposed curriculum is "clearly secular and materialistic" pointing out that religious studies is not one of the core subjects.

The MET continues: "The inclusion of music and drama in the foundation of the national curriculum is a serious disadvantage as they violate the teachings of Islam. Some aspects of art are also against Islamic teachings,

for example artwork relating to iconography is not permissible in Islam." The National Campaign for the Family calls the proposals "blinkered". They do nothing to improve Britain's unacceptable record in the care and upbringing of children, says Richard Whitfield, NCF chairman and emeritus professor of education at Aston University.

The Family Planning Association goes further. Mrs Doreen Massey, FPA director of education, commenting on the lack of sex education in the curriculum, said: "Sex education is a curriculum issue. The problems stemming from ignorance are too urgent to ignore."

Both the Assistant Masters and Mistresses Association and the Incorporated Society of Musicians complain about the lack of consultation time. The ISM is also concerned about the marked shift in the national curriculum to maths and sciences.

A poll conducted by Gallup for the *Daily Telegraph* this week showed that most parents support the Government's plan to introduce a national curriculum and written tests for pupils at key ages. Of the 1,028 respondents, 71 per cent were in favour of written tests and 24 per cent against.

Reduce leaving age to 14 - Boyson

by Barry Hugill and Sarah Bayliss

Sir Rhodes Boyson, a former education junior minister, is calling for the school-leaving age to be lowered to 14.

In a speech to be delivered later this month to a conference of the right-wing National Council for Educational Standards, he will argue that "school for many 11-year-olds is a five-year sentence". Non-academic pupils, provided they pass a basic literacy test, should be allowed to leave at 14.

His views were echoed this week by Mr Peter Dawson, general secretary of the Professional Association of Teachers - the teachers' union considered to be closest to the Government in its thinking.

Mr Dawson said the money saved would fund a massive investment in nursery education.

Sir Rhodes will urge the NCES members, many of them Tory activists, to continue agitating for a break-up of the state education system. He will tell them that a "nationalized education system cannot work" and that all schools should be "free" to operate on the open market.

In common with many on the Conservative radical Right, Sir Rhodes believes that party moderates have been "seen off" and that little now stands in the way of a total transformation of the education system.

They point to Mrs Thatcher's insistence that "most" schools will opt out of

i.e. control as proof of her intent to revolutionize the system.

Party moderates, grouped around the Conservative Education Association, fear Mr Boyson has lost the initiative to the Right and that his Bill, unless significantly modified, could lead to a fall in educational standards. The strength of the CEA lies in its local authority connection. Members include two former chairmen of the Association of County Councils' education committee, Mr Philip Merriall and Mr John Horrell.

The association is demanding that the opt-out plans be dropped completely.

As for the proposal that London boroughs be allowed to opt out of the Inner London Education Authority,

Open enrolment, page 11
Conservative conference, page 8

the association is scornful of "the narrow Toryism that seeks to detach and look after the wealthier Conservative parts of the capital and to disregard the rest".

Meanwhile, research shows that Scotland's Parents' Charter - which, for nearly five years, has given parents across the border much stronger rights in getting their preferred choice of school - is leading to sharp differences in the size of inner city primary schools.

NOTICEBOARD

PEOPLE...

Mr Neville Stewart, head of Desidera community high school, Chwyd, to be director of the Centre for the Study of Comprehensive Schools. Mr Keith Poyser, deputy head of Tawd Vale high school, Lancashire, and Mr Richard Tili, deputy head of the Forsters School, Northamptonshire, to be deputy directors.

Mr Roger Partridge to be national sports officer for the National Association of Boys' Clubs.

Dr Philip Cheetham is the new head of Warwick School. He was formerly head of science at Rugby School.

CONFERENCES...

October 2-4 Environmental issues in the secondary school curriculum organized by the Centre for the Study of Comprehensive Schools at Nottingham University. Speakers include Lord Belsford, David Cape, Mike Flood and Tom Margerson. Details: CSES, Westworth College, University of York, Heslington, York YO1 5DD.

October 16-17 National Bureau for Handicapped Students' annual conference. At the Holiday Inn, Birmingham, on raising disability awareness, particularly in colleges, education authorities and training schemes. Details from Rosemary Watts, National Bureau for Handicapped Students, 336 Vision Road, London SW9 7AA.

October 16-17 National Society for Education in

Art and Design conference at York. Speakers include Tom Hudson and David Marjoram. HMI staff inspector for art and design. Details from NSAD, 7A High Street, Corsham, Wiltshire SN13 0ES. 0249 714825.

October 17 National Association for Pastoral Care in Education Weltham Forest group conference on Pastoral care in a multicultural society. Speaker: Michael Marland. Details from Patsy Wagner 01-556 9351.

October 17 The National Association of Governors and Managers is running a series of conferences in Cambridge, Leeds, Manchester and Taunton for governors, parents, teachers and officers on the annual report and parents' meetings: how do it go and can we do better next time? Details for Cambridge from Tom Hinds or Brenda Rowlandson, Education Department, Shire Hall, Cambridge CB3 0AP (0223 317520); for Leeds from Elizabeth St David Smith, 80 Morris Lane, Leeds LS5 3EN (0532 780218); for Manchester from Dennis Gario, Education Department, Crown Square, Manchester M60 3BB (061-234 7184); and for Taunton from Stephen Gale, Education Department, County Hall, Taunton TA1 4DY (0823 333461).

October 18 Baker's revolution - success or failure? Organized by the National Council for Educational Standards at the Royal Festival Hall with Sir Michael Balfour, chair of the CSE, Mr Martin Rogers, Anne Sofer and Desmond Waltons. Fee £15. Details from the Honorary Secretary, 1 Hinchley Way, Esher, Surrey KT10 0BD.

October 20 National Association of Schoolmasters' Union of Women Teachers' annual conference in Birmingham with Professor Tyrrell Burgess on teacher appraisal and Professor Ted Wragg on privatization and the prospects for state education. Details: NAS/UWT, Hills Court Education Centre, Rose Hill, Rednal, Birmingham B45 8PS.

October 10 Skills-focused teaching course organized by the Leicestershire/Northamptonshire branch of the National Association for Pastoral Care in Education at Groby Community College to examine the skills needed for groupwork and co-operative learning. Fee: members £2, non-members £3. Details from Gowan Wharrier, Newbridge High School, Forest Road, Coalville, Leicestershire.

October 10 Skills-focused teaching course organized by the Leicestershire/Northamptonshire branch of the National Association for Pastoral Care in Education at Groby Community College to examine the skills needed for groupwork and co-operative learning. Fee: members £2, non-members £3. Details from Gowan Wharrier, Newbridge High School, Forest Road, Coalville, Leicestershire.

October 17 A world of difference organized by Marxism Today at the start of One World Week on the UK's relationship to the Third World at the University of London Union. There are lectures, readings, higher education, development education, community linking and debating sessions. Details from the National Association for Environmental Education conference officer, Miss Joy Palmer, is School of Education, Durham University, Leazes Road, Durham DH1 1TA (091 374 3540).

October 17 A world of difference organized by Marxism Today at the start of One World Week on the UK's relationship to the Third World at the University of London Union. There are lectures, readings, higher education, development education, community linking and debating sessions. Details from the National Association for Environmental Education conference officer, Miss Joy Palmer, is School of Education, Durham University, Leazes Road, Durham DH1 1TA (091 374 3540).

October 17 A world of difference organized by Marxism Today at the start of One World Week on the UK's relationship to the Third World at the University of London Union. There are lectures, readings, higher education, development education, community linking and debating sessions. Details from the National Association for Environmental Education conference officer, Miss Joy Palmer, is School of Education, Durham University, Leazes Road, Durham DH1 1TA (091 374 3540).

October 17 A world of difference organized by Marxism Today at the start of One World Week on the UK's relationship to the Third World at the University of London Union. There are lectures, readings, higher education, development education, community linking and debating sessions. Details from the National Association for Environmental Education conference officer, Miss Joy Palmer, is School of Education, Durham University, Leazes Road, Durham DH1 1TA (091 374 3540).

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

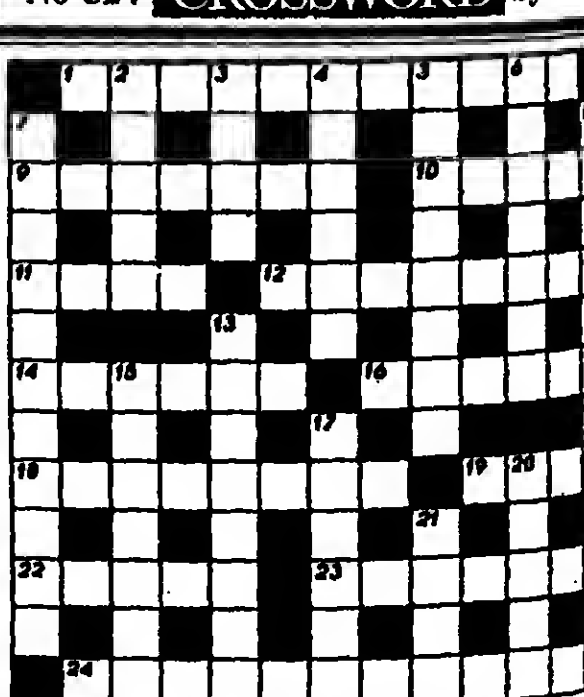
November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

November 2-7 Northern Children's Book Festival: a variety of events will involve children of all ages in schools and libraries in Northumbria, North Tyneside, Newcastle, South Tyneside, Gateshead, Durham, Sunderland and Cleveland in readings, discussions, poetry, illustrating and creative writing workshops and other book-related activities. Evening "Meet the author" sessions with Kevin Crossley-Holland, Nancy Chambers and Pat Thomson and a grand gala day finale in the Eldon Square Recreation Centre, Newcastle, with Jan Mark, Peter Connolly, James Riddon, Jan Plankowski and Ruth Brown. Details from Ann Kirtin, Schools Library Service, The County Library, The Willows, Morpeth, Northumberland NE67 512385.

No 324 CROSSWORD by Ruff



Across

- 1 Changing one's mind looks bad during holidays (11)
- 2 Gives voice and breaks the tension (7)
- 3 It holds the unloved Emperor malcontent (5)
- 4 Blighted, capered for security reasons (4)
- 5 Holiday dampour and what it may do to one's activities (8)
- 6 Sleepyhead? (6)
- 7 Sawe pade (6)
- 8 This is dropped on plants by birds (8)
- 9 Goes back to sea? (4)
- 10 "Acacia" is willow (5)

Down

- 1 Athenian garret (5)
- 2 Where barbers get refreshers? (14)
- 3 Farms with so head (6)
- 4 It may be unlucky taking out a hire (5)
- 5 Manager to speak about physical education (7)
- 6 Difference achieved by outwitting examination candidates (11)
- 7 They build a nest on moss, perhaps (5-6)
- 8 Hands and feet example (3)
- 9 Blasted to some extent (7)
- 10 It stands out for the poor (6)
- 11 Scatter-brain (5)
- 12 It turns to after opponent (4)

THIS WEEK

EDUCATION	2
EDUCATION	16
EDUCATION	17
EDUCATION	18
EDUCATION	19
EDUCATION	20
EDUCATION	21
EDUCATION	22
EDUCATION	23
EDUCATION	24
EDUCATION	25
EDUCATION	26
EDUCATION	27
EDUCATION	28
EDUCATION	29
EDUCATION	30
EDUCATION	31
EDUCATION	32
EDUCATION	33
EDUCATION	34
EDUCATION	35



Boundaries of freedom



What is an extra?



Fey rolls



Elmann's Wilds



Niero finances



EXTRA: COT

WHAT DO YOU MEAN BY 'ADEQUATE'?

Close observers of the Department of Education and Science last week witnessed a remarkable event: a consultation document that appeared genuinely to consult (rather than insult) those it was aimed at and one that even appeared to recognize that local education authorities still have some valid part to play in the education service.

The consultative paper on *Charges for school activities* (page 14) is a fair-minded attempt to restore the largely accepted position that existed before the courts and ombudspersons started throwing doubt upon the legality of charges for individual music tuition and field trips.

It is not, as some claim, the first step along the road to the ending of free education. That step was taken long ago by parents in their keenness to buy more than the education service could or would provide.

It remains to be seen, however, whether this attempt to put payments for "extras" into a safer legal framework represents a further significant - if unintentional - step along that road.

On the face of it, the suggested formula of statutory fundamentals that must not be charged for, and regulated extras which may (but not must) be, is a pragmatic attempt to legitimize customary practice. It recognizes the different patterns of parental contributions that have grown up within and between authorities and continues to allow i.e.s.s some discretion.

For the first time, it outlines statutory arrangements to ensure that children from the poorest families are neither charged for, nor deprived of, the

enriching extras that have become a part of many schools.

This is a non-regressive rather than a wholly progressive step, however. It promises to add to the very real stigma felt by children already distinguished by their receipt of free school meals. And it makes no allowance for those families trapped just above the level of absolute poverty who find the cost of educational extras a considerable burden.

Making governors the final arbiters of what allowable charges shall be passed on to parents, and for the arrangements for relieving hardship, will at least give schools the legislative freedom to devise policies that are sensitive to circumstances. But the extent to which schools can do this will clearly be circumscribed by the willingness of education authorities to underwrite such remissions.

Authorities will continue to be free to fund schools so that they do not need to charge, just as they are free to continue to provide school meals that meet minimum nutritional standards. But it is idle to pretend that the proposed legislation will leave the delicate ecology of custom and practice untouched.

As soon as any new limits to the statutory responsibilities of hard-pressed education authorities are spelled out, so there will be inexorable pressures to level down to them, particularly where authorities find themselves making discretionary payments out of rate-capped income.

Attention will inevitably be focused on the proposal to make it unlawful to charge for "the cost incurred in making and maintaining an adequate provision of books, equipment and materials for the

education provided in the school".

The distinction between what is and is not "adequate" is just the sort of legal quagmire this legislation is supposed to extricate charges from. The Government is not proposing to make it legal to charge for books and materials over and above this level anyway - at least, not yet - so they might as well simply drop this elusive notion of adequacy.

Though the Government gives a welcome re-statement of its commitment to free and equal access to suitable education, nothing in this paper affects the voluntary contributions parents may make. What threatens the equality of opportunity increasingly is not so much parents' ability to pay charges as the discrepancy between what some schools can afford to provide, thanks to the voluntary contributions of parents, and what other schools can manage in less favourable circumstances.

Indeed, many schools would maintain that "adequate provision" by their authority went by the board long ago. Many now fundraise more than they receive in capitation and spend much of it on books, equipment and essential materials.

The distinction between the educational haves and have-nots will become all the sharper when city technology colleges and grant-maintained schools not only vie for the limited amounts of support available from local businesses, but also erode off the wealthier and more motivated parents.

Even without any increase in charging, the quality of education a child can expect in the future seems set to depend increasingly not just on age and aptitude but also the ability to pay in one form or another.

Second opinion FALSE FEARS ON FINANCE DEVOLUTION

Savvy as the Secretary of State, Mr Kenneth Baker, is, he probably expected the suspiciously spontaneous "outrage" in response to his proposal to devolve more financial autonomy to schools. What must be more galling to him is the very Conservative education authorities who have been so proud of their radical credentials.

The most general accusation concerns, in the words of Mr Philip Merridale, former ACC chairman, "the volume and speed of change" proposed, and, according to Dr David Muffett, Hereford and Worcester's chairman, "the decision incompetently to accelerate the legislative process".

Whatever their other considerable merits, in both these men are wrong. Even ignoring the fact that the decision of pilot schemes was unequivocally part of the Conservative election manifesto, it is difficult to see how a Secretary of State who only weeks ago heard local authority proposals on financial devolution by September 1989 and who actually admits that these "would need to include a proposed timetable for phased implementation", can be described as in-competent.

Other worries are equally flimsy. It is argued that schools with old-fashioned premises, long-serving teachers and a poor catchment area may cost £20,000 a year more to run than their more modern neighbours in affluent areas; as a result, equal financial allocations resulting from a "per capita" formula would be disaster.

But that is precisely why the Government nowhere proposes such a simplistic formula. Instead, a multi-frame-work is suggested which will take the i.e.s. allocation of resources into consultation with governing bodies, a way which accounts for exactly the "different social needs and different types and sizes of school" that the opponents pretend the Government ignores. Indeed, so many are the loop-holes risked that many of us are fearful that obstructive authorities will use them to stifle initiative.

Another objection concerns allegedly large administrative costs to be borne by authorities and schools. Instead of budgeting "more resources forwardly in large aggregates", as feared that authorities will have to set detailed budgets for schools. One can only say that i.e.s.s in the past have been budgeting to precisely this, how on earth they then been able to match money to need and thus avoid waste?

If anything, the Government's proposals do not go far enough. Improving, say, medical and legal aid for school transport, and even improving with local authorities, there seems to be no reason why schools should not be able to contract out for these services.

Probably the most pervasive argument against the proposals (and the most paternalistic) concerns the role of school governing bodies in running their own schools. In experience, the truth is that the inverse proportion to the power of school governing bodies is the responsibility you give them. In dependent schools, for instance, budgeting, accounting and fundraising for more than 400 pupils is carried out by the headteacher, not the school secretary who is responsible. It is precisely because governing bodies have a direct influence on the progress of the school that they are prepared to volunteer both time and expertise.

Of course, no one would be foolish enough to argue that problems are avoided entirely. Nevertheless, difficulties do not constitute good enough to delay or even great enough to cause serious doubt about these vital reforms.

Anthony C...

Anthony M V Coombs MP, Conservative, Backbench Campaigner on Education

Bert Lodge reports on Church leaders' reservations over the Education Bill ...

Anglicans spell out doubts on school reforms

A warning that the present dual system of church and county schools could be changed "virtually beyond recognition" is contained in the Church of England's response to Government plans to allow schools to apply for grant-maintained status.

The Church says this will happen if a large number of voluntary-controlled schools gain grant-maintained status. In a "controlled" school the church-nominated governors are in a minority but in an "aided" school they form the majority.

The letter from Mr Geoffrey Duncan, C of E board of education schools secretary, points out that grant-maintained status could be a way for controlled schools to obtain the autonomy of aided status without having to pay compensation to the local authority.

At present, controlled schools outnumber aided institutions by three to two. The consultation paper twice uses the word "autonomy" in relation to schools which opt out, the letter says, but the word has many legal implications. It suggests the governing body will control the institution and its assets.

"It will be necessary to define such schools in relation to such matters as VAT and corporation tax, the vesting of property including playing fields, furniture and equipment, the use and ownership of charitable endowments, power to borrow money and mortgage the school's assets."

"Any persons taking on the role of governor of a grant-maintained school should know much more fully and clearly than the paper is able to set out just what he or she could be undertaking."

Religious education in grant-maintained schools seems not to have been thought about, the board of education comments. Although denominational teaching is forbidden in a county school, it is not the governors, once it is opted out, introduce RE of a particular denomination or religion.

The letter concludes: "Even if the correct legal device can be found for relating the 1944 Act to this type of school we believe the introduction of grant-maintained schools on anything other than a very limited basis will constitute such a departure from both the letter and spirit of that Act that the whole partnership between Church and State in the provision of education would be thrown into question."

... while Patricia Rowan visits a London borough that is determined to take advantage of the Government's proposals

The leader of the committee planning Kensington and Chelsea's withdrawal from the Inner London Education Authority has admitted that the borough might not save money by opting out.

Mr Bryan Levitt, ILEA member for Kensington as well as a local councillor, accepts that the borough would continue to rely heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

Mr Levitt told an invited - largely hostile - audience of school governors of the town hall last week that the heavily on some ILEA services after cutting the link with County Hall but he believes that the school system would be improved, with better exam results and fewer truants.

The cost of a tactical withdrawal

London boroughs which plan to opt out, though as opposition leader Neil Kearney pointed out, previous attempts to share trading standards and computing services had failed disastrously.

Mr Levitt said Kensington and Chelsea would continue to use the excellent ILEA further education colleges and adult education classes. The borough wouldn't have any special schools of its own either, but it would listen to parents' views on this issue. It hadn't yet thought about employing educational psychologists, Mr Dawkins admitted later, or how the 1981 Act would be implemented.

Though he had no answer to questions wanting to know how opting out would raise standards, Mr Levitt said the council was more worried about the bottom third of the ability range than the top third, and wanted to improve the staying-on rate. Both he and Mr Dawkins were flooded by questions about an adequate supply of teaching pool.

It was impossible to calculate what it would cost to run their own education service, Mr Levitt confessed later, particularly since the new Education Bill could add up to 50 per cent to running costs.

Mr John Reddaway, convenor of the GCE secretaries, says: "There are many factors which affect the relationship between performance at 18-plus and degree attainment at 21 or 22". For example, a good A level student from a "sheltered school" fares differently in the freer environment of higher education.

He accepts there is still some scope for improving the capacity of A levels to predict degree results, including increasing the number of points between C and D grades and between D and E grades.

There is no reason to suppose that students admitted to higher education are less able than those who have not.

Students admitted to higher education are less able than those who have not.

NEWS



Dr Graham Leonard: the proposals seem born of desperation

would be thrown into question."

In addition to the Church's detailed responses to the Government consultative papers, the Bishop of London, the Rt Revd Graham Leonard, has sent an open letter strongly criticising the proposals. The implications and assumptions on which they are based are deeply worrying, says Dr Leonard, who is chairman of the Church's board of education. "We do not accept that standards in every school in the country are lower than they ought to be."

In any case, many of the proposals were likely to benefit schools already doing well at the expense of those which were struggling.

Dr Leonard, regarded as a conservative mainly for his opposition to the ordination of women, says the proposals seem born of desperation, as if "anything different from the present system must be better".

The comparison of pupil performance in Britain with "competitor countries" suggests the motivation behind the reform is essentially utilitarian and materialistic. "We would have liked to see some reflection there of the significance and potential worth of each individual in his own right and not just as citizen and employee."

Dr Leonard also questions the political philosophy underlying some proposals. While welcoming financial delegation he insists some controls must remain to ensure a basic fairness in the overall availability of resources.

"The untrammelled operation of market forces is not appropriate to the provision of public good. Creeping privatisation of the education system is no more acceptable than would be the outright handing over of all schools to commercial enterprises."

IN BRIEF

Racist claim

A report on a claim by four white schoolgirls from Weavers School in Wellingborough, Northamptonshire, alleging that the deputy chairman of the authority's education committee made a racist remark while visiting their school, has been sent to the education department. A department spokesman said the report will be discussed with Mrs Gina Dgden, the committee chairman, next week. The deputy chairman, Mr Graham Fordyce, a Conservative, denies making the remark.

NF march ban

A planned march in Dewsbury by National Front supporters has been banned by Mr Douglas Hurd, the Home Secretary. The march was called in support of 24 white children whose parents have refused to send them to a predominantly Asian school. The parents have said they do not want NF support.

Strike call

The Haringey branch of the NUT has called for a one-day strike following the London borough's announcement that it plans to cut education spending by £8.4 million over two years. About 200 NUT branch members unanimously decided to ask the union's executive for a ballot on strike action against job losses and possible redundancies.

SHA wins vote

The Headteachers' Association of Scotland has voted in favour of its 800 members joining the Secondary Heads Association. The move - which will now go before a special meeting - was agreed at the association's annual conference last weekend.

WHY IS AMMA THE FASTEST GROWING TEACHERS' UNION?

1 EXPERT ADVISORY SERVICES

AMMA provides expert help and guidance to all members on all aspects of their professional lives. Advice and support is always given in complete confidence and free of charge.

As an AMMA member you will have free access to a team of full-time legal officials. Every year they help hundreds of members resolve problems both minor and serious.

2 COMPREHENSIVE INFORMATION

AMMA places great emphasis on the quality of its communications with members.

Every member receives a free copy of 'Report', AMMA's magazine, with informative and stimulating articles and views on professional matters, regular bulletins and frequent publications.

3 EXTENSIVE INSURANCE COVER

AMMA provides an unrivalled package of automatic free insurance benefits.

4 DEMOCRATIC REPRESENTATION

AMMA is an open, democratic organisation run by teachers for teachers. All decisions are taken by elected members or secret ballot.

JOIN NOW AND PAY ONLY £25.00 TO COVER MEMBERSHIP THROUGH TO 31ST DECEMBER 1989.

See your School/College representative for details or write to:
Assistant Masters and Mistresses Association
7 Northumberland Street London WC2 Tel: 01-930 6441



LOOKING AFTER YOUR INTERESTS



some might even seek to opt out of their diocese. Embarrassment, chaos and ill-will seem likely to follow, which again can do no good to the historic partnership. Mr Baker and the Prime Minister looking over his shoulder may have to pay more serious attention to the Church's strictures before the Bill's drafters go much further.

OPENING UP TO PARENTS

The new proposals to open school records to parents (page 7) seem entirely sensible. The proposals are not too prescriptive. They do not encourage schools to keep records about personality and behaviour, and quite rightly say that if such records are passed from one teacher to another, they should also be open to parents.

It would be nice, but unrealistic, to think that these provisions will make much direct difference to the quality of information given to parents about their children's progress. Standardized records, like standardized tests, are rarely very revealing. But opening up the records to parents should at least help to prevent children being dogged by prejudiced or subjective judgements as they move up or between schools.

Where schools have been less than candid to parents about children's progress, or lack of it, open records may well indirectly help to improve the quality of information given to parents. Even if only a minority fails to see their child's progress, the reactions and questions of those few could lead to

better communication with the rest.

The consultation paper asks for views on whether references for jobs and college entrance should also be open to parents. Here too, it would seem sensible to let parents (and, just as important, students) see what has been written. If communications between school and home about a student's progress have been adequate, there should be no nothing surprising in the reference. If not, communication needs improving.

There is of course a possibility that open references would end up bland and meaningless. But the present closed system carries the risk of hastily written UCCA and job references that fail to do justice to students, or to point out circumstances that may have affected an individual's examination results.

There has been concern that the new proposals give school governors the responsibility for seeing that records are properly kept and disclosed. Since good record-keeping - and indeed good communication with parents - is an important ingredient of any successful school, it seems perfectly appropriate that the governors should specifically oversee this aspect of the school's conduct.

NO COMMENT

"The cluster chairperson/facilitator: Elected temporary facilitator of the cluster group by the group. Prepares agendas, arranges meetings, ensures administrative support."

From: *Cambridge INSET opportunities booklet*

PLATFORM



The management consultants, Coopers & Lybrand, have been commissioned by the DES to examine ways in which increased delegation to schools might operate. Quentin Thompson, director of the firm's education and training consultancy, and Andrew Watson, a member of the project team, outline the main components of the exercise

Fixing the boundaries of freedom

Virtually all local education authorities already have some level of delegation to their schools, even if it is only a capitation scheme; many have delegated much more. Thus the Government's plan to increase the level of delegation is one of the less contentious parts of its latest package of proposals. Nevertheless, the consultation document proposes the introduction of the "maximum possible delegation to schools" which raises questions about what that means and about how this degree of delegation can best be made to work.

Our current project for the Department of Education and Science is to help address these hard questions. It is not simply concerned with financial information, not least because the delegation proposals are themselves wider than finance. For this reason we prefer the term "local schools management" rather than "local financial management" or "financial delegation to schools" with their narrower connotations.

We are examining the issues under six (linked) headings.

Extent of delegation: The interpretation of "maximum possible" must be that all responsibilities should be delegated unless there are strong reasons for retaining them at the centre. At the boundary, the question will be a matter of judgement depending, *inter alia*, on local circumstances and on the feasibility of operating any required safeguards from the i.e.s. In one sense, the Government's proposal that a school should be able to opt out of its i.e.s. altogether means that it should be possible to delegate all functions to the school. In that sense "opting out" is the end of the delegation spectrum.

Hence the issue becomes one of balancing arguments at the margin but within the context of a school being an i.e.s. one. The authority will need to strike a balance between the objective of giving schools freedom to make their own decisions on the one hand and, on the other, questions of i.e.s.-wide educational policy - and of efficiency and administrative responsibilities. For example, clearly responsibility for teaching staff can be delegated but to what extent can the i.e.s. expect schools to cover for long-term absences; and for redeployment and recruitment, where should the respon-

sibilities lie? And for technical end professional services (advisers, architects, education welfare officers) are there principles operating which distinguish them from the purchase of support services (cleaning, grounds maintenance)?

Safeguards and constraints: To have a meaningful role in education provision, an i.e.s. will wish to set limits in some of the areas of schools' decision-making, for example to define minimum standards. This might embrace educational policy (for example, on pupil-teacher ratios), property (as the landlord) and ancillary activities (quality of price for school meals - insofar as any legislation allows).

Clearly the more constraints the i.e.s. imposes, the less complete the delegation scheme will be. This must be part of the balancing process to determine the extent of delegation. I.e.s.s. will need to consider, first, for which topics they wish to set safeguards and, second, what the nature of those safeguards might be. Performance indicators may help with the monitoring of standards, although our project is not explicitly examining that. Decision-making in schools: There

educational institutions, ranging from the automatic to the collegial. Greater delegated powers means that decision-making within the school takes on greater importance. The issue under this heading concerns the role of the governing body in the decision-making process, the desirability of some form of management "team" within the school and the extent of the need for clerical and/or professional support

Four issues stand out: the treatment of staff and premises, the phasing-in period, and the formula for allocating resources

staff in the school. Undoubtedly, schools are likely to continue to need "consultancy" type support from their i.e.s., at least in the early stages.

Information flows: Delegated responsibility will require more information to flow between schools and i.e.s.s. in both directions; there would

facilitate such flows. Much, but not all of this information will be financial; it will all need to be closely defined. Although accuracy will be important, speed and timeliness will be critical (to help produce and then control budgets, for example). Both the school and the i.e.s. will be concerned with ensuring that the information system can produce the information needed for management purposes.

Increased delegated authority will provide schools with additional flexibility to respond to the priorities of their consumers (employers as well as parents and pupils). It will be important for i.e.s.s. and schools to identify what information might best provide the relevant signals from these various constituencies. To explore this avenue fully would require a separate project in its own right.

Implications for the local authority: Increased delegation will lead to changes in responsibilities and in management within the local authority. Each authority will need to undertake a management review to examine what changes will be needed - both inside the education department and outside it. Our project will identify the main areas for which change can be expected. These are likely to include, within the education department, the operations of the area offices (if any), the role of the advisers/inspectors (to whom will they be offering advice, on what basis and how might they be funded) and the ways in which functions and funds held centrally should be managed and controlled (for example contingency funds and development funds for curriculum). There will also be significant implications for departments other than education - particularly for personnel, architects/buildings and treasurers.

Implementation: The successful introduction of LSM will be critically dependent on timing, phasing and training - and, perhaps, a degree of additional financial support to schools. An important issue will be the relative merits of phasing by budget heads (building on from capitation as schools become progressively more adept at taking their own decisions) as opposed to phasing by school (starting with schools which would be voluntarily enthusiastic and using them to encourage the others). It may be possible to think in terms of different degrees of

delegation for different sized schools (in bands by firm entry for example) with the lowest level simply being an enhanced capitation scheme. A limiting factor on the speed (and level) of introduction will be the need for i.e.s. to retain the trust of its schools - *sine qua non* for success.

Each of these six areas gives the potential of difficulties: so far, four have stood out. First, the treatment of staff and staff costs (the use of school average costs, costs of supply teachers and of redeployment); second, the treatment of premises (mainstream, fuel, and community use); third, the question of phasing. Despite its current exclusion from our terms of reference, it is impossible to arrive at a fourth issue which is the nature of the formula for resource allocation and the extent of delegation, safeguards and information flows are all linked to the shape of the formula and what will be feasible for it to embrace.

The intention for the formula to be primarily pupil-number driven raises questions about the extent to which it should be "damped" as a protection against significant fluctuations in pupil numbers. This is likely to be particularly important in view of the possible consequences of the enrolment proposals. Further, proposals for the national curriculum may well have staffing implications, which will also need to be reflected in the formula. Thus the issue of the national curriculum is separated from the proposal for the opening out, open enrolment or the national curriculum.

Our project has three specific aims. First, it will form an input to the drafting of any detailed regulations which would support or amend the primary legislation. Second, it will help inform the process of the criteria against which the i.e.s. of State will assess i.e.s.-wide schemes. Third, it will help the i.e.s. produce any guidance to i.e.s.-wide schools about the design of their schemes. To help us reach our aims, we are drawing formally on the experience of three i.e.s.s. and informally on a much larger number. Work will be completed before the year.

The idea was in the country for 25

DIARY

Lost appetite

It came as a shock to the teachers at Liverpool's Shorefield comprehensive school when they learnt last Thursday that Kenneth Baker was to pay them a visit in the afternoon. Not that they minded - Mr Baker was just the man they wanted to see about a local problem.

Shorefield is a community college dealing with adults as well as youngsters. Well, it did until last Thursday when the Manpower Services Commission decided to slash funding for a scheme for the unemployed. Last week 87 people were involved in it; by Monday it was down to 17.

The teachers knew, of course, that their chance of getting anywhere near the Minister was remote. These visits invariably involve a quick walk round the school, a cup of tea with the head, a smile for the cameras and back into the ministerial limousine. So they wrote him a stiff letter instead.

As it turned out they needn't have bothered because the great man turned up several hours early.

He had planned to have lunch at Liverpool Polytechnic and had actually tucked into his starter when the attendant special branch man noticed one of those unattended packages on the table and called in official police. It had been dumped by a drunken student and this caused - how can I put it? - panic.

Ed Minister to place of safety, namely Shorefield School. So unexpected was he that angry teachers kept on teaching, and uttered no word of protest. As for the package... it was harmless.

Gnawing anxiety

My postbag is filling up with alternative names for Mr Kenneth Baker's GERBIL (Great Education Reform Bill).

A Lincolnshire correspondent offers BEAVER (Baker's Educational Academically Very Exceptional Reforms), OTTER (Over-The-Top Educational Reforms) and VOLE (Victory Over Local Educationalists).

Little tearaways

And while on the subject, in *Animal World* this week what should I come across, but an article on how to keep gerbils?

Gerbils, I now know, are active little creatures and require plenty of room. By far the best way to keep them in is a specially-adapted fish-tank, or gerbilium. They're best kept occupied by borrowing, but they also enjoy shredding things. What better way, you might think, of disposing of all those critical responses on GERBIL that still pour into the DES?

Sinking feeling

The Prime Minister makes little secret of his view that the DES is staffed by well-meaning, comprehensive-supporting upholders of a now worn-out, sloppy Establishment.

Apparent confirmation of this view has come from an unexpected quarter. In a new survey on careers in the Civil Service, the mandarins, under the First Division Association, has this to say about the DES:

"The department has picked up a reputation for being full of soggy, Guardian-reading intellectuals; this is going a bit far but there is perhaps a grain of truth in it."

The entry on Elizabeth House mentions that it is "uncomfortably close to the proposed site for the Channel Tunnel terminal in Waterloo Station". But what it doesn't mention is the fact that half the car park at the DES is due to disappear if the Channel plan goes ahead - including the Education Secretary's private parking space.

Acronym

"It gives poor children... a chance denied their parents and many of their friends. The 100-dollar question is what happens to those friends... It is an argument that is going to be waged with passion as Mr Baker sets about applying the lessons of his American visit."

So wrote Barry Huggill after accompanying the Education Secretary on a visit to one of New York's magnet schools last month. The following week saw Mr Neil Fletcher, Labour leader of the Inner

Strict screening for city college's first pupils

Parents and pupils will have to go through at least four stages of detailed interviews and aptitude tests before being accepted for a place at the first city technology college, which opens next year.

Only in the independent sector is there such a rigorous screening process before a pupil is offered a place. The CTC organizers insist it is essential "to ensure a comprehensive intake".

Five thousand homes in Solihull and Birmingham received application forms far places this week. They include a questionnaire for the prospective pupil, which will be used to guide the first interview.

Primary school heads will then be approached for a statement on candidates, "which we will set great store by", said Mr Brendan McGuinness, project director for the CTC, which will be called Kingshurst after the name of the school currently on the

Solihull site. The college's first head, Mrs Valerie Bragg, was appointed at the end of last month.

In selecting pupils best suited for a technologically-orientated education, each child will have a number of specially designed tests. Mr McGuinness stressed that it was not a question of being selective academically.

The closing date for applications is November 21, after which potential pupils will be interviewed. Parents will be interviewed separately. Candidates will hear the results by Christmas.

Steps will be taken to ensure that the proportion of ethnic minorities, girls and disabled pupils in the new school reflects the catchment area, which covers 18 Solihull and 18 Birmingham primary schools. Castle Bromwich has been excluded because it is not thought to be one of the least privileged areas. Before the selection procedure gets under way in earnest, in specially

L.e.a.s 'should be drawn to magnets'

Local education authorities should grab the idea of magnet schools to fend off those in government who want to reduce their powers, according to a pamphlet issued on the eve of the Conservative Party conference by the education unit of the right-wing Institute of Economic Affairs.

Professor Bruce Cooper of Fordham University, New York, argues that by setting up magnet schools - which specialize in areas such as science, technology, music or dance - i.e.s. leaders could show they too were interested in choice, liberty and quality. Larger authorities could "seize the initiative and show that they, too, are capable of competing with the central government's moves towards privatization".

Professor Cooper, on sabbatical at London's Institute of Education, says the need for schools to compete "triggers reform, diversity and competition". Magnet schools challenge i.e.s.s and motivate schools to improve. Quality, in the American experience, rises for everyone.

A key to the scheme is the ability of funds to follow the students. With magnets, the entire funding of i.e.s.s would change, with better schools being rewarded with greater resources and poorer, less desirable ones being phased out.

Much choice is already available in

Britain, Professor Cooper notes. "The last frontier, as the Thatcher Government recognizes, are the large, urban school systems which offer large numbers of British children fewer choices and lower quality. Magnets should be targeted at that group: the imprisoned masses of children in the largest cities."

The immediate advantage of magnets, he points out, is that they allow existing state schools to be re-designed and to compete, without necessarily destroying the state system. Teachers may have to, or want to, move schools, but they do not lose their jobs. I.e.s.s remain as service centres for the magnet schools.

More than 1,800 American local education agencies have established at least one magnet school. The scheme particularly impressed Mr Kenneth Baker during his recent visit to the States. Last week, Mr Neil Fletcher, the leader of the Inner London Education Authority, suggested that i.e.s.s should copy the idea of different schools specializing in different subject areas.

Professor Cooper suggests the setting up of a national Magnet School Task Force with representatives from the Department of Education and Science, industry, teachers, heads and i.e.s.s who are sympathetic to the concept of choice, and competition. The task force would present the idea nationally, encourage chief education officers to try it out locally and help schools to become special.

Professor Cooper says he hopes Britain will use the best of two approaches - the "top down" establishment of super-magnets, proposed from the centre with a total re-design of the i.e.s. schools or the "bottom up" system of individual, separate magnet schools created by headteachers working closely with their staff and community.

Magnet Schools is available, price £3, from the Education Unit, Institute of Economic Affairs, Warlingham Park School, Chesham Common, Warlingham, Surrey.

London Education Authority, speaking in favour of the concept at a Labour Party fringe meeting.

The debate continued this week with the right-wing Institute of Economic Affairs affirming support for the magnet principle and the country's first city technology college - the nearest equivalent to a magnet school planned in Britain at present - publishing details of the way it will select its students. TES staff report.



Mrs Valerie Bragg: the first CTC head

equipped technology bus, bought from British Schools Technology (BST) will visit all the schools to give parents a chance to see what is on offer and to observe the response.

Final touches are being put to the curriculum, which will be flexible enough to incorporate the TVEI and CPVE on a modular basis. Although Mrs Valerie Bragg, the headteacher, is planning some banding and setting, the vocational courses will be mixed ability.

The international Organization for

Rehabilitation through Training (ORT) is giving advice on methods of teaching technology. The BST and Trent Polytechnic are also advising on new technology.

The national curriculum will be used as a framework, with more technology as pupils move up the school. It is hoped that eventually adult education classes, industrial training courses and wider community use of the school will be possible in the evenings and during holidays.

Ian Nash

Are you a Charity or Almshouse Trustee?

Charifund is designed exclusively as a wider range investment for registered charities and provides professional investment management in a tax-free equity fund. Income distribution is made quarterly, free of tax.

Charifund provides the ideal investment for the narrower range gift portion of a Charity's portfolio. The Fund is exempt from tax and the income distribution is made quarterly. NAACIF is a special fund set up by the National Association of Almshouses, for the investment of almshouses funds.

CHARIFUND

The Equities Investment Fund for Charities

M&G

The M&G Group, M&G House, Victoria Road, Cheshamford CM1 1PB, Tel. (0245) 266206.

Please send me details of the scheme I have ticked.

My/Mrs INITIALS SURNAME

ADDRESS

POSTCODE

AXEN Member of the Unit Trust Association

This unit-trust is available to residents of the Republic of Ireland.

THE M&G GROUP

☐ Charifund
☐ Charibond
☐ NAACIF

M&G

Even a school trip abroad can turn into a forum for discussing the Government's Education Bill, as Ian Nash reports

Byron and the Cardinal meet in Italy

Globe-trotting is becoming infectious among politicians in search of sound educational practice. Last weekend, the Lord Mayor of Westminster, Mr Kevin Gardner, and the Lady Mayors, Baroness Gardner of Parkes, were in southern Italy.

Obviously they were taking part in a cultural exchange visit between Cardinal Wiseman high school in Ealing and Lord Byron College - a private English language school - in Bari, to commemorate the 30th anniversary of Italy's entry to the European Economic Community.

But there was a further reason, as Mr Gardner pointed out: "I am here to see how we in Westminster, when we take over education, can promote these links between Bari and London."

At first sight, Italy's education system is not one to emulate. It is recovering from two decades of turmoil and student strikes. Elementary schools have to work a shift system, often until 9pm, because the shortage of classrooms is so acute.

But it was the co-operation between private and state schools that most intrigued the Lord Mayor. "It is not unlike what we have been saying about the medical service, where costs of medical technology are so high that there must be a sharing of resources."

The students who go to Lord Byron College two or three times a week, usually after school or work, for three or four hours, vary from seven-year-olds to medical students, business people and the retired. The college prepares students for the Cambridge

Certificate of Proficiency in English. But its directors are loath to label the college exclusively private. In-service training courses for state school language teachers form a large part of their work. Mr John Credico, director of studies, said: "Right from the start we have taken 40 or 50 a year."

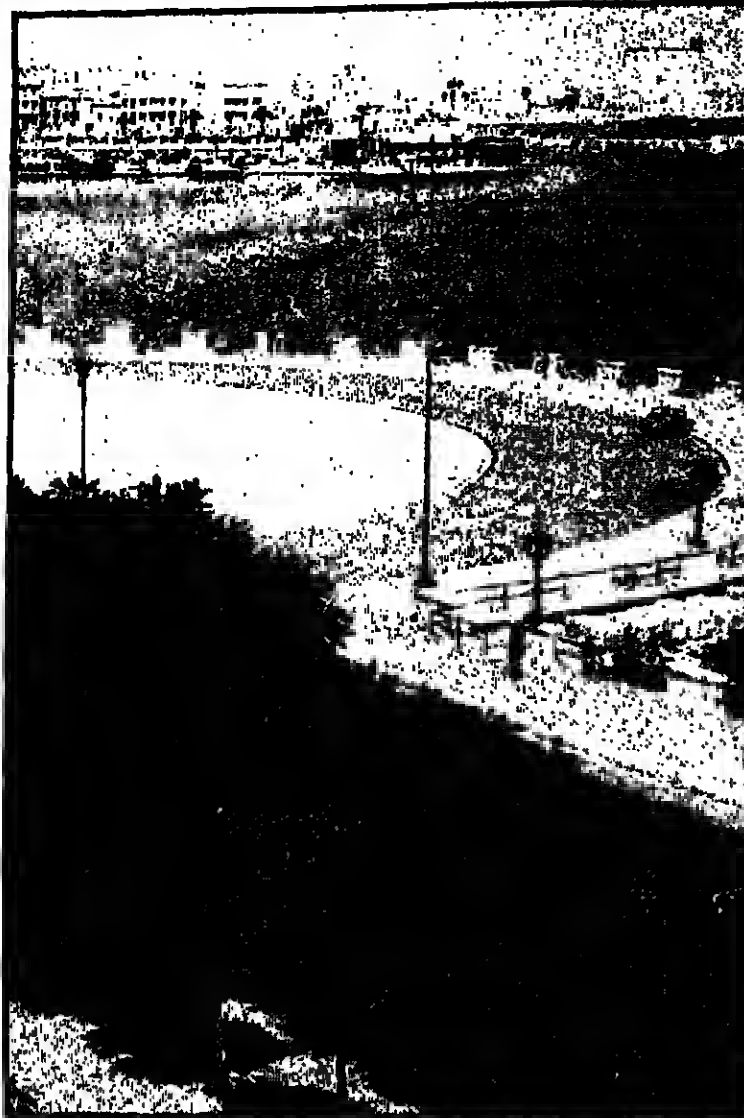
The college has always attracted top quality language teachers from England and this has raised expectations among pupils. Students are quick to criticize their Italian school-teachers who do not match up. They are also critical of an emphasis on literature at the expense of oral work.

One former student, Isabella Palumbo, said: "When we meet English people we know all the rules, but are unable to speak to them." Her friends agreed and said they were often told they sounded like a character out of Dickens, with no grasp of modern idiom or colloquialisms.

Another former pupil, Isabella Rubino, praised the cultural exchange programme. "The value of having English students here is that we hear the language as it is really spoken."

Bari may not have the dazzle of oil-rich Dallas (although it does have some of the world's finest olive oil) and the Lord Mayor did not attract the media attention that the Education Secretary commanded.

Many of the Bari students and residents were surprised to find themselves the centre of such attention. "Why did you not go to Naples or Sicily if you were coming south?" they asked Bina Mangarini, one of the five Cardinal Wiseman exchange students.



Bari: a rich cultural centre enjoyed by British visitors

At first, the five Londoners might have shared their surprise. Only two of them spoke any Italian, Josi and Anna Cacioppo, and they were there for the richness of the art and architecture, and to improve their A level GCE art studies.

But the trip seemed to have fired the others with an enthusiasm for the language - and the organizers hope 60 students will make the journey next year. The moment they arrived they captured the hearts of the Italians at the college and their hotel. They became affectionately known as "the mad English girls" for their midnight swimming and dancing around the pool.

Theresa Sullivan, or "La Rossa" as she was called had not been abroad before, yet after one week she exuded the confidence of a seasoned traveller. "We did not learn any of the language before we came. We picked it up here," she said.

Asked whether they would have preferred the monuments and galleries of Florence and Rome, there was a resounding cry of "No!" As they pointed out, Bari is a richer cultural area than most people realize.

Not only does it have a major art gallery, it also has the second largest opera house in Europe, seating 4,000. It was the Bari company that recently performed *Aida* in Egypt.

The students' enthusiasm for the language was one of the achievements of the trip. As one said: "For some weeks after we return to school we will be asking each other, how do you say this or how do you say that? Just a few snatches of languages can open new worlds and need not be just drudgery."

This is how Mr Gardner wants to see languages flourish in the national curriculum.



Links to the Westminister - Bari children and their teachers

IN BRIEF

SHA backs pay scheme

The Secondary Heads Association has joined other teacher unions and local authorities in calling for a national joint council to negotiate teachers' pay and conditions. The SHA says an NC would be the best way to ensure "fair and productive negotiations".

The proposal now has the support of four teacher unions, and all-party backing from local authorities. The National Association of Head Teachers has yet to indicate its stance, while the Professional Association of Teachers is against such a body.

Capital marks

A dramatic rise in the number of poorly qualified people catching up through adult education classes last year has been revealed in a survey of the capital by the Inner London Education Authority. Almost half the 252,000 students were from ethnic minorities, 70 per cent were women and 40 per cent had no previous qualifications.

Plus for maths

A centre for innovation in mathematics teaching, launched at Exeter University's school of education, will pioneer curriculum developments, explore new teaching styles and devise resources. Major projects are being funded by the Industry Education Unit at the Department of Trade and Industry, the Manpower Services Commission and other agencies. It is hoped that industry and commerce will provide further backing.

Clegg award

Two leading names in education have been awarded honorary degrees. Professor Hugh Clegg, the industrial relations expert who reviewed teachers' pay was made a Doctor of Letters by his old university, Warwick, and Baroness Warnock, Mistress of Oriel College, Cambridge, who chaired the Warnock Committee on special education, was made a Doctor of Letters by Essex University.

Social funds

In his first move as chairman of Northern Ireland's new Community Relations Unit, Dr Brian Mahoney, Education Minister, has announced a £250,000 initiative to improve contact between neighbouring Catholic and state schools. The money will partly fund in-service courses where opportunities will be shown for working with nearby schools.

Charitable move

The Royal Society of Arts Examinations Board has moved away from the RSA and become a separate limited company with charitable status. The company with charitable status, the aim is to strengthen the board's accountability and enable it to respond more quickly to changes in education and training.

Cruising ahead

Educational and family cruises around the South Wales coastline have been organized by the maritime department of the University of Wales Institute of Science and Technology. The cruises are designed to get the conservation message across to Welsh people.

Acid rain watch

Schoolchildren from all over the world have set up acid rain monitoring stations for the start of the WATCH Acid Drop Project, organized by the junior wing of the Royal Society for Nature Conservation, and the Field Studies Council. Further information is available from The Paskell, RSNOWATCH, The Centre for Education, Llanelli, SA2 2NR.

Bert Lodge talks to Frank Tyson - once the terror of the Australians on the cricketfield and now a master at an English independent school

Fast bowler-academic stands the Test

Scholar-sportsmen somewhere in the stage of swapping their college blazer for an academic gown were doing well that year. Dennis Silk, now Warde (that's what they call the head there), hit a hundred in the Varsity match; Ian Beer and John McG Ken-dall-Carpenter, now headmasters of Harrow and Wellington respectively, were pulling on the English rugby jersey.

But not many noticed the 23-year-old who had just started his teaching career in a secondary modern in the Midlands chuck it up to begin his first season in county cricket.

It was 1953 (the year incidentally, when a non-academic, Mr Stanley Matthews, finally got his Cup medal). Barely 12 months later, every school-boy who had ever fancied himself a fast bowler had dropped all previous heroes for Frank Tyson.

Agonized over by the England selectors as to whether he should be picked at all, he went to Australia and in the second Test had practically bowled the Australians out before lunch. His figures for the match were 10 wickets for 130 runs. Writing about that tour, the captain Sir Leonard Hutton, entitled the chapter "Tyson is a knockout".

This year, Frank Tyson picked up the chalk again in an English classroom. Not the abrasive red-brick ethos of where he started though, but amid the green and gothic of a public school. Denison College near Uttoxeter in Staffordshire has a new French master.

Fast bowler-academic, even intellectual? Not easy to envisage when his contemporary Fred Trueman, fresh up from the mint shirt at Maltby, was dispersing a different sort of image, even if it was tempered a good few years later by the published verse of the temperamental John Snow.

But talking to Tyson today, it is to a reflective man of ideas, not some full-timer of yesterday. His next book, the 16th, *The Test Within*, is about the relationship between temperament and talent.

A fellow teacher might ponder on the subjects studied at Durham University: English, French, History; the very stuff of the arts side of a school, a valuable member of staff, but not the sort of BA which would get him head of department.

It is as though teaching would suffice in itself. Indeed, after pointing out that during the past 26 years spent in Australia he often lectured in teacher training colleges, he added, "But teaching kids is the most rewarding."

His cricketing promise showed early. As a grammar school lad in Middleton, he was playing in the Lancashire League at 15 and was invited to join the ground staff at Old Trafford. But he had won a bursary to Durham and his dad was determined that it should come first. In fact he never did play for Lancashire. It was Northamptonshire he joined in 1952 and played some games in the second XI to gain residence qualifications.

But he had been noticed by more than a county selection board. He

turned out one day for the university against Yorkshire.

In his book, *Fifty years of cricket*, Sir Leonard Hutton wrote: "My introduction had been in a one-day match at Roker. It meant nothing to me when a raw-boned lad with rather a cumbersome action charged in from an over-long run. In his first over, he produced a full toss which thudded against my pads before I could use my hat in defence - that hadn't happened to me for a long time with an English bowler. That evening I wrote to Cubby Allen (former England captain, then a selector) that I had seen a genuine fast bowler."

Freddie Brown, another former England skipper, was more emphatic. He reckoned he had not seen faster bowling since the great Harold Larwood in the early 1930s. Yet it was not accompanied by the wasteful extravagance fast bowlers often perpetrate when striving for speed. Out of the 40 or so Test bowlers of this century, only three or four averaged wickets more cheaply than Tyson's 18.56 for each of his 76 Test wickets.

But while Fred Trueman went on for seasons, "Typhoon" Tyson seemed to blow out almost as quickly as he had arrived.

Why? "Well, not because I was jaded," he emphasizes. "I didn't play top cricket long enough for it to happen. I reckon I remained fast for about another three seasons."

What happened was that occupational hazard of the professional fast bowler, injuries brought on by that



Typhoon winds up: Frank Tyson in form, then and now (inset)

incessant pounding they inflict on their heels. After taking two years to mend, stress fractures followed.

After a final season in the Lancashire League in 1961 the Tysons emigrated. "I'd been very impressed with Australia when I toured in 54-55. It struck me as a great country for youngsters." His reputation made job-finding easy and he joined the staff of Corey School, an independent day establishment of nearly 2,000 pupils.

Thirteen fulfilling years and three children followed and Mr Tyson, now a housemaster, must have looked set in the staffroom to be a Melbourne Mr Chips. Then he abruptly gave up schoolmastering.

It was not a dramatic chuck-up. The Australian Government launched an ambitious nationwide scheme primarily to train coaches and he was offered the job of director for Victoria. Now, several of his books have been about coaching and it is obvious this highly cerebral application of teaching

fascinates him. Again, it was a happy 12 years but he gave it up to come back to England. Why?

"I think there's such a thing as a migrant menopause. We've been back before but it's been just for a few weeks. You need to reassess your values, see the people you were brought up with. Then you go back with a new slant on life. But I shall go back again in about two years."

To writing or journalism perhaps? He has written regularly, covered Test cricket over here for Australian television. "No, I've maintained my connections with the educational world."

For all the alternative avenues which might have opened easily to him, the impression comes through of a man who sees a valid order in there being a small cadre of experts with something valuable to pass on to a much bigger and younger corps out there eager to absorb it. To be a senior member of that cadre is more satisfying than occupying pages of Wisden.

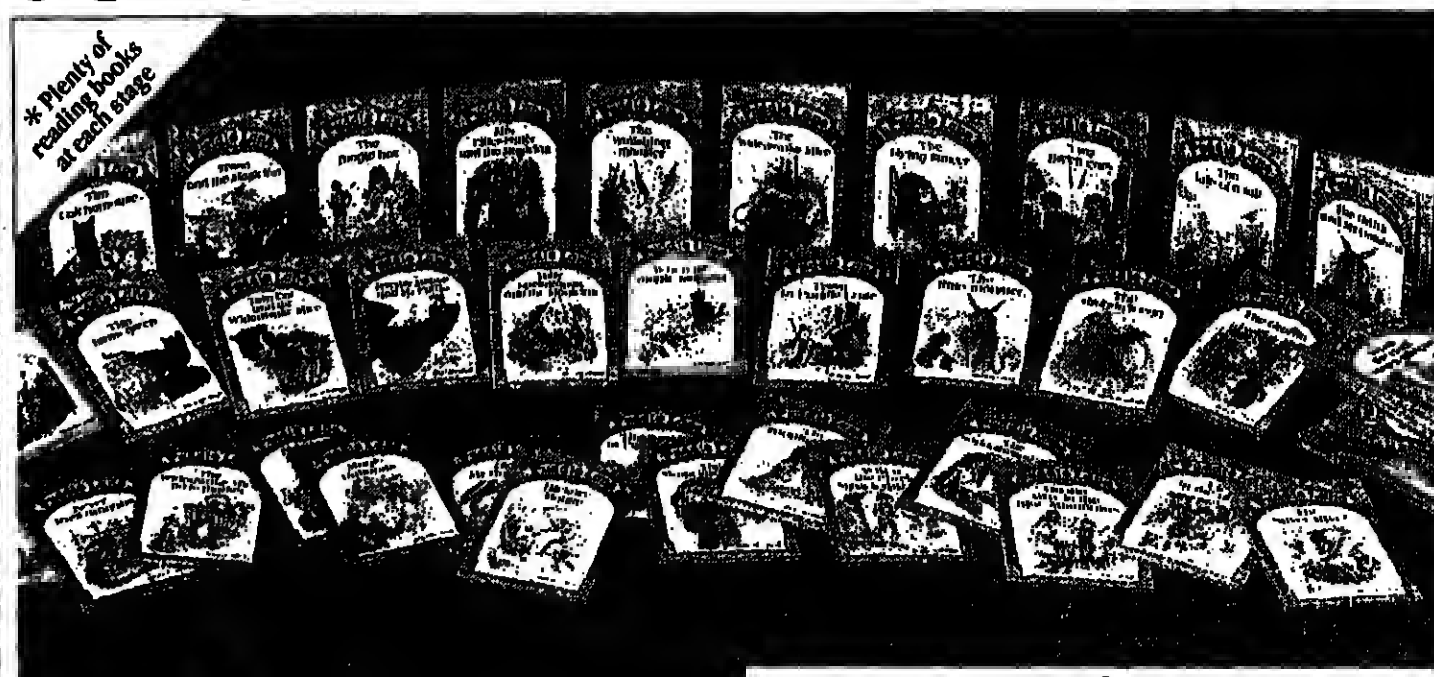
More reasons to visit Puddle Lane.



SINCE its launch nearly two years ago, the Puddle Lane Reading Programme by Sheila McCullagh M.B.E. has been used successfully by thousands of teachers and their pupils. Now there are even more books and activities in the Puddle Lane Series. There are 33 Puddle Lane standard-format reading books, including 15 at Stage 1. There's a teaching frieze and two exciting activity books. There are cassette tapes and work cards too. And during 1987, we'll be publishing 11 new books in the main series, and a big new storybook.

At only 85 pence per book (60 pence for the activity books), Puddle Lane helps you get the most out of your budget.

So if you and your class have never been to Puddle Lane, start planning a trip now. Post the coupon and we'll send you full details and a free information pack by return.



Puddle Lane
FROM
Ladybird

Find out more by sending for our free information pack today.

Name: _____

School: _____

Address: _____

Postcode: _____

Return coupon to Dept P.L., Ladybird Books Ltd,
Beeches Road, Loughborough, Leicestershire LE11 2NQ.

PROFESSIONAL ASSOCIATION OF TEACHERS

Does your union have a Certificate of Independence as a Trade Union?

Does your union have a no strike rule?

Can you obtain legal advice on any subject 24 hours a day, seven days a week?

Can you obtain incentive bonus shopping at the majority of High Street stores?

Do you receive your association's journal mailed directly to your home?

Professional Association of Teachers
FREEPOST
Department EW
99 Friar Gate
Derby DE1 5BR

NEWS

Barry Hugill and Sue Surkes report from the Conservative Party conference

The unlikely alliance that proved the pundits right

The Prime Minister and her Education Secretary are united in their determination to reform schools. We know this because Mr Kenneth Baker said so in his keynote speech to the conference on Wednesday.

No one can be sure why the Education Secretary chose to link his name with that of the leader, but a good few in Blackpool's Winter Gardens put two and two together and concluded that all those rumours about disagreements between them must be true. It's the first rule of politics—always assume the opposite of what is said.

The disagreements around the pace of reform, and in particular how many schools choose to opt out of I.e.s. control and how soon.

Mr Baker used to say that only a handful would choose to go it alone by the end of the decade. The Prime Minister has let it be known that she wants a lot more than that.

The Education Secretary sensibly refrained from indulging in the numbers game, but for those who like reading between the lines he did seem to be telling his audience not to anticipate a revolution overnight. Here are his exact words: "In many cases parents will be happy with their I.e.s. and the schools it provides. They may not want to exercise the choice we are extending. That is their right. There is no compulsion. But a new choice will now exist just as we created a new choice for millions of council tenants."

It is also said that the two do not see eye to eye on the curriculum. The Prime Minister is a woman of firm views—she wants the basics and she wants them tested. She would not be adverse to the newspapers publishing 'league tables of schools' tests results so that parents could judge which were the good ones and which the bad.

Mr Baker is a liberal humanist fond of reading novels and reciting poetry. Of course he wants the three Rs but one senses that his notion of a good education is broader, less utilitarian than Mrs Thatcher's.

At the end of his speech he quoted Shakespeare to illustrate his belief that a teacher's task is to discover and nurture the talent which lies deep in

every child. "The task of education is to find that quality, however deeply hidden in a stone, but as Shakespeare said 'the fire in the flint shows not till it be struck'."

Mr Baker is not as keen as his employer on simple league table style testing, and reiterated that his famed benchmark tests are about more than passing or failing. They will be, he explained, about identifying strengths and weaknesses in both teaching and learning.

It would seem, then, that he is going to stand his ground and not allow himself to be stampeded by the rambling Tory right who are even now preparing the next stage of their campaign to destroy the local authorities and hand schools over to "market forces".

The latest idea is to allow districts within a local authority to opt out of the I.e.s. Although the trainwreck of Mr. Tim Brighouse, Oxfordshire's chief education officer and, to the best of my knowledge, decidedly not a rabid rightist, is gaining resonance



Kenneth Baker... steering clear of the numbers game

amongst the radicals with the junior minister Mr Bob Owen said to be in favour.

Although the right have been vocal on the conference fringe, it is moderates who have decided to come out of the closer and publicly air their fears that Mr Baker's plans are not so much reforms, as ill-judged tinkering.

They have discovered an unlikely ally in Dr David Muffett, the high Tory chairman of the Hereford and Worcester education committee, who would, at the very least, sue if I were to describe him as a moderate in anything let alone education.

As reported elsewhere on this page he is warning that Mr Baker, in his determination to destroy forever the zealots of Haringey and Brent, is also going to do enormous damage to praiseworthy privatizing authorities like his own. A case of throwing out the baby with the bath water, although Dr Muffett puts it more elegantly: "Do not demolish the house just to get even with the philistines."

He received a burst of applause for that as did Margaret Howe, a councillor from North Tyneside, who thought the Education Reform Bill was a classic case of "taking a sledgehammer to

crack a nut". Mr Baker appeared to nod his head in agreement when she urged that the core curriculum must "do more than produce kids who can only read and write—education is more than that".

Here was a speech against the coming reforms and was implicitly critical of the Bill's chief architect. But maybe, just maybe, he might be quite happy that the likes of Mrs Howe and Dr Muffett keep on shouting.

Barry Hugill

Party faithful refuse to toe the line

The Conservative conference tradition of deference to its leaders was shattered during a fringe meeting addressed by Mr Kenneth Baker when local party representatives repeatedly expressed concern about the proposed Education Reform Bill.

Dr David Muffett, chairman of Hereford and Worcester's education committee, feared that the proposals outlined in the Government's consultative document could "put us down to some hypothetical median line to which you wish to raise Brent, Haringey and Ealing".

He told the meeting, organized by the National Advisory Committee on Education, that Hereford and Worcester could be forced to abandon the scheme that had saved £2 million a year for the past four years by privatizing school meals so to scrap the system which had made the I.e.s. the national leader in energy conservation in schools. The authority could also be denied the right to insist on the best headteachers.

Mr Geoffrey Woollard of south-east Cambridgeshire, vice-chairman of the party's eastern area education advisory committee, could not see the

relevance of piecemeal opting-out of schools and the establishment of city technology colleges to a largely comprehensive area such as his. He demanded reassurance that the proposals would not lead to the back-door reintroduction of selection.

Doyle about how far parents wanted to be involved in their children's education were expressed by a representative from mid-Kent. His comments about the significance of the "abysmal" attendance at parent-governor meetings drew wide applause from the packed meeting.

Mr Kenneth Baker, after a glowing report of the Government's progress so far, accepted the need for training governors. But, on the question of parental participation at meetings, he accused some authorities of having been "less than enthusiastic" in ensuring a good turn-out. He added that it was up to Conservatives to encourage Conservative-minded parents to come forward for election to the new governing bodies, because he was sure the party's opponents would be doing the same.

He used the German education system, which includes annual testing, to deny recent claims that

tests in the early years of primary school can discourage children. However, he said representations on the proposals would still be willingly received.

Opting out provides the only means of escape from an education system which fails to regard most children as individuals, Mr Ray Honeyford, the former Bradford head, told a conference fringe meeting.

Mr Honeyford, who was pressed into early retirement after opposing the authority's multi-cultural education policy, said attitudes in large areas of the state service were underpinned by an assumption that the system or society, rather than the child, teacher or school, were to blame if a child did badly. Many causes, including class, sexism and "something called racism" were used to support this approach.

The meeting, jointly held by the populist Campaign for Real Education and the traditionalist Bow Group, heard that this view, which was opposed by the vast majority of parents, encouraged teachers to provide the child with excuses for failure.

Sue Surkes

Leicester school widens choice for disabled

by Allison Fisher

A Leicester special school has set up a further education centre for pupils with severe physical disabilities who are not catered for anywhere else in the county.

Five youngsters started this term at the Broadview further education centre in the grounds of Ashfield School. They have their own tutor who is helping them choose courses at local sixth-form and community colleges, and other institutions. Some courses will be provided in the centre itself, which is based in a double mobile classroom and funded by the local education authority.

One of the centre's students is the first in the country to start an Open University degree while still at a special school. Ashfield's headteacher, Mrs Ann Hinchliffe, told a conference on the 1981 Education Act held by the National Union of Teachers and the Royal Association for Disability and Rehabilitation.

Mrs Hinchliffe said that choice in further education was more important for the disabled. "The 1981 Act has reduced freedom of choice for disabled children at a time when it is being increased for everyone else. Once a child has been statemented there is a reduction of options," she said. "This was the reason for retaining special schools."

But she said such schools had been prone to isolation: when she became head of Ashfield three years ago she found it "had an island mentality". Since then parents had become more involved and there were two-way links between centre and mainstream pupils.

The school had also been equipped with a micro-technology assessment centre which will assess children throughout Leicestershire on their micro-technological needs from typewriters to special adaptations on computers.

Ealing forces governors to step down

The Labour chairman of governors of Villiers High School in Ealing, West London, is being forced to step down by his own party.

Mr Gordon Gill is among six political nominees to the governing body which the Labour group has decided to replace in an effort to restore relations with teachers and pupils.

The school's staff has been leading a campaign for the reinstatement of the head, Mr Lawrie Baker, who took early retirement after governors narrowly backed a vote of no confidence in him over an alleged racist incident.

The Labour group will now recommend that all six political governors—four Labour and two Tory—be replaced.

Mr Baker is due to take up a research post with the National Foundation for Educational Research at the end of this term.



Boardcopier A-1

THE 4-STROKE ENGINE

INLET COMPRESSION COMBUSTION EXHAUST

There is always one problem when you're giving a presentation. It's while your audience should be taking notes, they're taking notes.

Perhaps then, you'll take to Canon's new A1 Boardcopier. As you can see, it's a whiteboard with a photocopier underneath. You write your notes and diagrams on the board, press a button and out pops an A4 copy.

Now with ordinary boardcopiers, that's it: one copy. A poor one too, on fade-prone paper.

Wanting more copies means a trip to a separate copier.

The Canon, however, is the first with a plain paper copier. It gives copies just like ones from an office model.

And gives as many as you like, there and then. It can even copy photos, drawings and previously prepared artwork. A transparent cover holds them in place on the board and they copy as easily as handwriting.

Your hand-outs will have never looked so professional. Nor indeed will you.

To find out more about Canon's A1 Boardcopier, please contact Ken Tapley at Canon (UK) Ltd, Canon House, Manor Road, Wallington, Surrey SM6 1BT.

Alternatively, dial 100 and ask the operator for Freephone Canon UK.

Canon

SCHOOL PLAN

BROCHURE

HOTLINE

0293 517566

For all your school travel needs

ATOL 1000

PRIMARY

 **Apple.** TES9/10
The power to succeed.

NEWS

Boards defy abolition of entry quotas

The Northern Ireland Education Minister's decision to abolish secondary school entry quotas is being defied by two education and library boards.

The southern and western boards argue that, under the terms of the Education and Libraries (Northern Ireland) Order 1986, the decision as to how children are allocated to schools rests with them and not with the Minister.

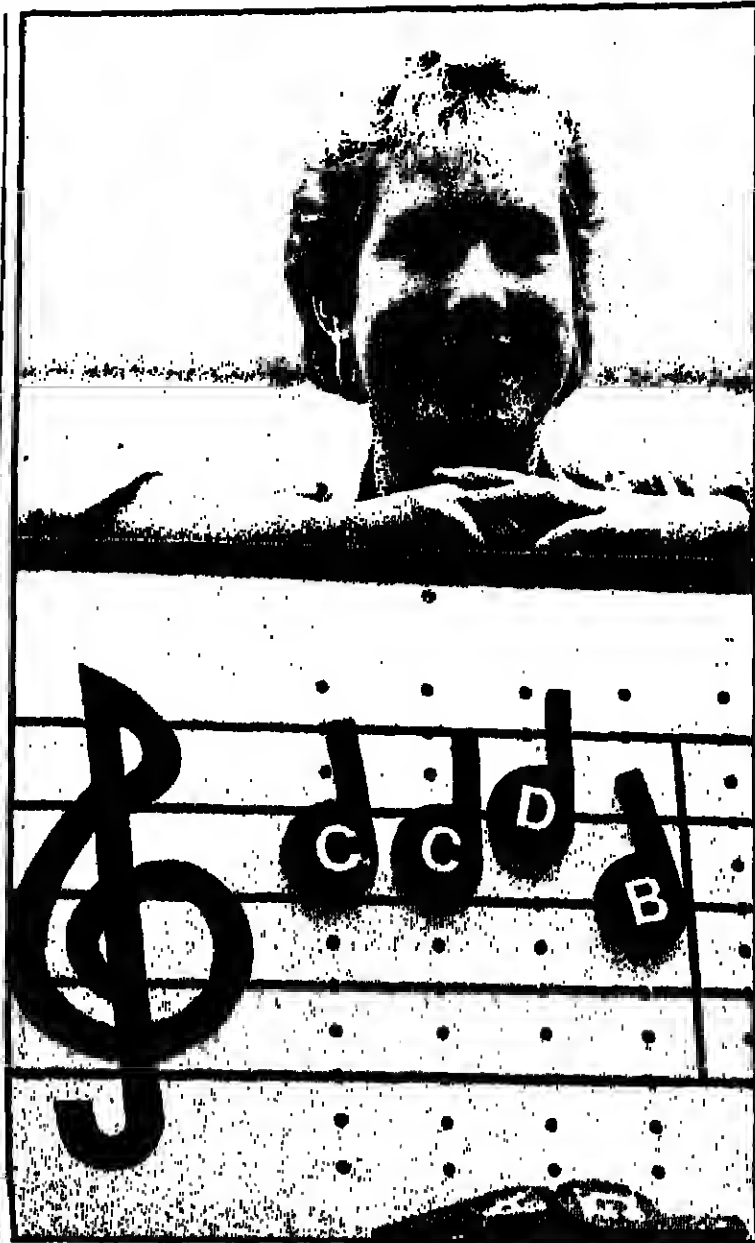
The southern board has adopted its education committee's recommendation to stick to its present policy of having pupils attend the nearest suitable school, on the grounds that greater parental choice would result in closures and mergers. It believes the instability that would ensue would damage pupils' educational opportunities.

The board's chief officer, Mr. Gerry Kelly, said: "What is not clear is whether the Minister has the power to enforce his ruling against a board which relies on the Order."

The western board also has decided to ignore Dr Brian Mawhinney's instruction since some 14 secondary schools, each with fewer than 400 pupils, need protection to stay viable.

In 1985, when a parent disputed the western board's decision not to permit a pupil to transfer to a school outside her catchment area, the High Court ruled that the need to support a school and maintain its viability must take precedence over the parents' wishes. Mr Justice Hutton said that the legal onus on boards to have regard to parents' wishes did not mean other factors relevant to their primary duty could be ignored, such as ensuring an adequate pupil intake.

The Department is empowered to give a binding direction only if it is satisfied a board is acting unreasonably.



Notable achievement: Nicola Ballantyne won the Women into Science and Engineering award for the best girl entrant in the Engineering Council's Young Engineers for Britain competition. Nicole, of the King Edward VII School in Glasgow, designed a computer-controlled device to help young children learn to read music.

Ian Nash reports on the DES discussion document on pupil files issued last week

Anger over plan to let governors control records

Leaders of the largest parents' organization in England and Wales are opposed to Government plans to give school governors power over the keeping and dissemination of pupil records.

The National Confederation of Parent-Teacher Associations has also condemned suggestions in the latest Government consultation document that schools should charge parents for copies of their child's records.

Under the proposal, schools would be required to keep details of educational progress. But storing of sensitive information on "behaviour and personality" would also be permitted "at the discretion of the school".

For school governors to control such arrangements was "quite unacceptable", said Mrs. Sheila Naylor, of the NCPTA. "A child's progress is a matter for the parents, teacher and head, not for the governing body."

In fact, she could find no justification for the publication of the document since it was the Government's avowed aim to introduce records of achievement which would make such information available.

Information excluded from the regulations would include statements on special needs and material given or received from outside bodies such as social services, doctors, psychologists and education welfare officers.

The Government's prime intention, the document says, is to give the

parents of state school pupils a right of access to records on their children.

"It would clearly be inappropriate for information such as suspicion or evidence of child abuse, to be subject to disclosure," says the consultation paper published by the Department of Education and Science and Welsh Office.

Also excluded would be teachers' informal notes, which would be considered their personal property unless the information in them was passed on, including by word of mouth, to another member of staff.

Schools would have to respond within 14 days to written requests from parents, including a divorced parent with joint legal rights, a legal guardian, foster parents or a caring organization with parental duties.

If parents object to the content they can add a statement to the records, a fact that Mrs Naylor found astonishing, since prejudicial or misleading statements should be deleted, not amended.

The Government also plans to revise regulations under the 1981 Education Act requiring a school to pass on information to any other school "considering" taking a pupil.

Parents' organizations have argued repeatedly for access to records, said Mrs Naylor. "But this document seems to be taking us down the wrong road."

Comments on the document should be sent to the DES by December 31.

Low standards of Steiner school worry inspectors

by Sue Surkes

Local authorities have been ordered not to send special needs youngsters to a Rudolf Steiner school in Hampshire because of inspectors' concern about low standards in education and care practices and in some aspects of hygiene and safety.

The Department of Education and Science circulated all authorities two years ago telling them not to send children with statements of special need to Drayton Manor School near Basingstoke and to review the cases of pupils already there with a view to withdrawing them.

The reasons for this action have only just become clear with the publication of an HMI report of an inspection carried out in October 1985.

The inspectors had identified problems on earlier visits and had given the school time to improve, but to no avail, a DES spokesman said.

The inspectors, who assessed the independent school with the help of a senior medical officer and a social services inspector, found that too many practices and decisions were being "left to chance", particularly by people who lacked experience and expertise.

Because of the principal's failure to delegate even the simplest tasks, many child-care routines were confused or broken down completely, they report.

"At the time of inspection, in terms of education and care practices and in some aspects of staffing, health and medical care, hygiene and safety, the school fell short of the standards required for approval by the Secretary of State as a school suitable for the admission of pupils who have a statement of their special educational needs."

The inspectors were broadly satisfied with accommodation at the school, which had 14 children on roll when they visited and now has seven. But rooms used for storing food were "dirty, untidy and unhygienic" until had an unpleasant smell. An environmental health officer was called in to remove food that was unfit for human consumption.

Staff at the school were committed but morale was low. None had a job description and there was no formal induction of new teachers or care workers. No staff member had been on a professional training course apart from residential conferences con-

cerned with Steiner philosophies, and some were unqualified.

The inspectors found there was no clearly defined policy on assessment and no diagnosis. At the time of their visit, all the pupils had varying degrees of learning difficulty. The majority had emotional and behavioural problems, language development problems were recorded for about half and some had additional physical disabilities.

There was no regular speech therapy or physiotherapy and staff were left to make their own contributions to language development in the absence of relevant written guidelines.

Little attention was paid to personal needs and there were no carefully planned individual programmes, HMI found, although the visiting educational psychologist had recognized these as a priority.

There was a written curriculum, but it had not been adapted for the range of pupils on roll. Resources were "often very lean".

The inspectors saw evidence of good personal relationships between staff and children. But they describe as "inappropriate" the principal's "active discouragement" of parental visits, personal telephone calls and presents from families other than at holiday times.

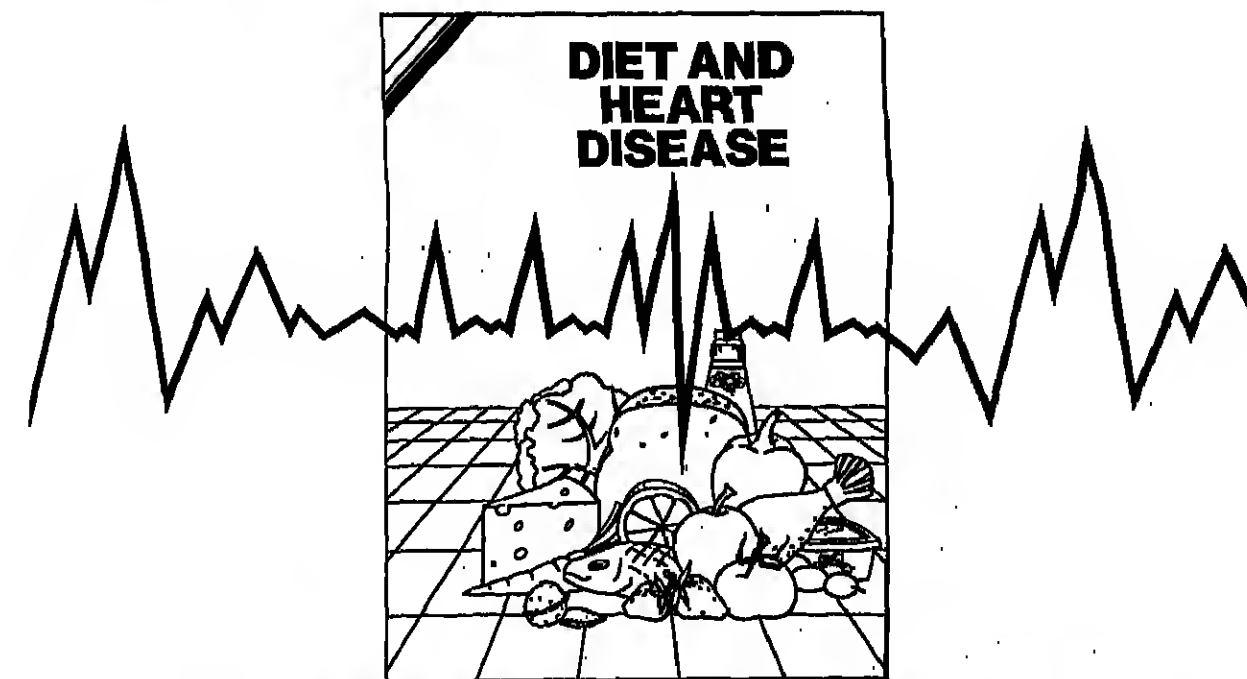
Mr Gunther Wulkau, who is still principal at Drayton Manor, said he believed that the inspectors had come with preconceived ideas. "I feel they do not readily accept the Steiner philosophy in its totality," he said.

He aimed to retire by next summer, he added, and the person he hoped would take over had plans to shake up the organization of the school.



Away day: young "Jaws" was one of hundreds of children who took part in a festival at London's South Bank sponsored by British Rail's Network Southeast. Included in the "day lick" were a youth music extravaganza, a raft race and a grand finale fireworks display.

NOW THESE FACTS ARE EASY TO DIGEST.



A comprehensive secondary school teaching pack for teachers of Home Economics, food and nutrition.

Our secondary school teaching pack should help to make your job easier because it gives you all of the latest resource material, clearly laid out in one ringbinding file.

It's full of factual information and classwork activity suggestions.

We've divided it into four modules: The Modern Epidemic, The Risk Factors, Dietary Goals and Practical Dietary Issues.

It fits the national criteria for the teaching of home economics and nutrition

Including the GCSE level examinations.

It's been developed and endorsed by experts in the fields of medicine, nutrition and education.

If you would like to receive the teaching pack, please fill in the coupon and enclose a cheque made payable to: The Flora Project. The pack costs £7.95 plus £2.00 p.p.

Alternatively just fill in the coupon below and we will send you a leaflet with further details.

Please send me: A copy of the teaching pack. ☐ Further details about the teaching pack. ☐

Name (Block Capital) _____

Address _____

REF NO: 801520

Please send the coupon to: The Flora Project, Burton Marsteller, 24-28 Bloomsbury Way, London WC1A 2PX. Tel: 01-242 0824.

Graduate total falls again

The number of students successfully completing undergraduate courses in British universities has fallen for the second year running.

The decrease is shown in *University Statistics 1985/86* published by the Universities Statistical Record this week.

The USSR, which publishes the booklet on behalf of the University Grants Committee, says the decrease reflects the reduction in undergraduate intake in 1981 following Government cuts.

The number of students in Britain obtaining degrees, diplomas and certificates in the decade to 1985 were 58,101 in 1975 and 70,461, 72,707, 74,244, 76,290, 75,907 and 73,582 respectively from 1980 to 1985.

But, says the USSR, the number of full-time undergraduates has in-

creased for the first time since 1981/82 by 0.5 per cent. New entrants paying overseas fees have increased and now represent nearly 10 per cent of all first year students.

All political parties on the Inner London Education Authority are seeking an urgent meeting with ministers on funding for major technical equipment in polytechnics and colleges. The authority has told Mr Robert Jackson, the higher education minister, that students' equipment needs will have to be met if the national "skills gap" identified by the Government are to be closed.

The ILBA applied for £8.5 million last year for major technical equipment in polytechnics and colleges but it received just under £2 million.

More schools experimenting with 'balanced' science

by Geraldine Hackett

Universities and colleges are having to come to terms with the fact that schools are broadening the science taken at GCSE level. Professor Roger Blin-Stoyle, chairman of the School Curriculum Development Committee told heads and science teachers in Croydon.

The south London borough is one of the local authorities encouraging secondary schools to switch from single-subject science GCSEs to courses that include all three sciences. For those students wanting two GCSE science passes, schools can offer a double award in science.

Since 1985, seven of the area's 25 secondary schools have stopped teaching single sciences to exam level and are now presenting courses termed "balanced science".

The resistance to balanced science in some schools stems from the fear that universities and employers will continue to prefer single sciences to integrated science, but according to Professor Blin-Stoyle, higher education at least is becoming more flexible. "I have to admit that some of my colleagues in universities are desperately ignorant about what is happening in schools, but there is a considerable change of opinion going on about the sort of students that should get places and the courses that should be offered," said the SDC chairman, who is professor of theoretical physics at Sussex University.

The fact that the national criteria for science GCSE stipulate that courses should have a core content had reassured university science departments. Evidence from the one available study suggests that pupils who have studied all three sciences on one O level course do no worse at A level than pupils who have followed single-

subject syllabuses, he said.

He told the conference that changes at A level are anyway becoming inevitable, with pupils taking a wider range of subjects. "The advice the Hignelson Committee (currently looking at A levels) is getting is that five subjects should replace the traditional three A levels. This would mean a reduction to some extent in the content and coverage of A level courses."

The education establishment in the form of the Committee of Vice-Chancellors and Principals, the Royal Society for Chemistry and the Institute of Physics, has issued statements of support for the teaching of balanced science. The only reservation had come from medical schools, which were looking for more information about the content of courses.

But Professor Blin-Stoyle warned that the endorsement by senior figures did not mean that everyone in higher education accepted the change. "You

must remember that what they say in principle may be different from the practice of those people who are responsible for the admission of students into university."

On the whole, though, the balance of power was changing, he said. Universities could not get enough students and were having to look at the content of their own degree courses. "The power is in the schools, the balanced science can be pushed with confidence," he said.

Mr Richard Foster, head of Monk's Walk school in Welwyn Garden City, Hertfordshire, told the conference that he had written to admission tutors in 116 colleges and universities. The vast majority had replied that balanced science passes would not be treated any differently to single-science passes, he said.

"The number who expressed a preference for single science passes was statistically insignificant," he said. His results were questioned by Mr Peter Jones, head of Edgworth School, Croydon. Mr Jones said he had also contacted colleges and had found that Reading University and Loughborough College both had reservations about balanced science.

Giving a response from Industry, Ms Sheila Fewings, assistant manager of the analytical section at Unilever research, said that her company was concerned to take on 16-year-olds who were enthusiastic about science. It intended to treat students with a double award in science in the same way as students with three single sciences, she said.

However, Mrs Christina Agambet, HMI, cautioned that the success in transition to balanced science in schools needed a strong lead from the local authority and in-service training for teachers.



Broadening science at GCSE level "can be pushed with confidence"

WELCOME TO QUEST

Quest offer fully supervised, quality, Adventure and Ski holidays for schools and groups, in the UK and Europe.

BETTER VALUE - we aim to provide a comprehensive range of challenging and Educational Adventure holidays at most competitive prices. Our prices start at £19.00.

SAFETY FIRST - on all Quest holidays, safety is of paramount importance. We consider this our single most important responsibility.

EXCELLENT LOCATIONS - our centres are situated in superb locations in France, Spain, North Devon and the Lake District.

100% SECURITY - As part of Granada Leisure Plc we are backed by one of Britain's top public companies. We are also members of ABTA.

PERSONAL SERVICE - Our personal service and attention to detail is second to none. Travel with Quest in '88 and we're sure you'll appreciate the difference.

SPECIAL SKI OFFER - We have a number of dates available for this ski season - please ring for details.

*199/20 to be nearest airport

Quest Adventure
Bournemouth Road, Haywards Heath
West Sussex RH16 4BX. Tel: (0444) 441300



BAKER'S BILL

The last consultation paper on proposed changes to the education system – which seeks to determine what local authorities can charge for – has been published by the Department of Education and Science, Barry Hugill reports. Opposite, *TES* staff report on the latest reaction to other proposals



Paying the fiddler: individual music tuition

Parents will pick up tab for 'extras'

Schools will be able to charge parents for field trips, music tuition, and a whole range of school activities not considered an essential part of the curriculum, once Mr Kenneth Baker's Bill becomes law.

The Government intends to move an amendment to the Bill authorizing charging in the expectation that it will reach the statute books by the end of next year. Parents can expect to be charged from the beginning of January 1989.

Mr Baker insists that the proposal does no more than "clarify" the legal ambiguity surrounding what are generally described as "extras".

Under the 1944 Education Act, local education authorities are obliged to provide every child with education free of charge. But for many years, some, if not all, authorities have made charges for "extras" such as the cost of school visits, board and lodgings during residential field trips, and music tuition.

In 1981, Mr Justice Forbes ruled in the High Court that it was wrong for Hereford and Worcester council to charge for music tuition. And the local Ombudsman has ruled in cases involving North Yorkshire, Kent, and Wiltshire, that the L.E.A.s should not ask parents to meet the cost of board and lodging for their children on field trips. The Forbes judgement, and the Ombudsman rulings, have caused L.E.A.s substantial difficulties and the local authority associations have sought clarification from the Secretary of State as to what they can, and cannot, charge for.

It is not the intention of the Government to require any L.E.A. to charge for any service it provides. It will remain optional for an authority to decide, for example, that it will continue to provide free music tuition. The governing body of a school, however, will be empowered to ignore its L.E.A. and

charge if it so wishes.

A school charging against the wishes of its L.E.A. would have to provide the activity free of charge to children of parents receiving family credit (Social Security benefit).

To avoid the accusation that he is intent on subverting the 1944 commitment to free education for all, Mr Baker is proposing to include in his Education Bill a list of categories for which it would be unlawful to charge. Alongside this he would introduce regulations, over a period of time, specifying what can be charged for.

At this stage, it is planned to include a clause in the Bill making it illegal to charge for "the costs incurred in making and maintaining an adequate provision of books, equipment and materials for the education provided in the school".

It is difficult to conceive, however, that the Parliamentary draftsman will be satisfied with a formulation guaranteed to bring glee to the legal profession. It would only be a matter of time before a court was asked to rule on what constitutes "adequate".

This could prove a serious problem for Mr Baker. If he were to strike the clause out of the Bill, he would be charged with ushering in the privatization of the school system. If he leaves it in, the law will remain as ambiguous as it is at present.

Officials at the DES were insisting this week that no decisions as to the precise form of the legislation have yet been taken, and that the Minister is "genuinely committed to consultation".

As with the other consultative documents, however, the period of consultation is rather short. Responses to this final paper must arrive by November 30.

This has led Mr Neil Fletcher, leader of the Inner London Education Authority and chairman of the Association of Metropolitan Authorities' education committee, to protest that the closing date for representation on the document is actually after the date on which the Bill is expected to be published.

Mr Fletcher said on Monday that he regarded the proposals with "suspicion". He predicted that L.E.A.s would find themselves under pressure from

Proposed items for which no charges could be made:

- The administrative costs of the local education authority, including allowances and expenses paid to members of the authority or of the education committee or to governors of a school.
- The cost incurred in employing teachers and non-teaching staff under a contract of employment with the authority or, in the case of an aided school, with the governors of that school, (except in the case of individual instrumental music tuition).
- The cost incurred in establishing the school, enlarging the school, or transferring the school from one site to another, and in maintaining the school premises.
- The cost incurred in making and maintaining an adequate provision of books, equipment and materials for the education in the school.
- The cost incurred in meeting the fees charges in respect of external examinations.
- The cost incurred in providing transport between home and school when such provision is required by section 55(1) of the 1944 act.
- The cost incurred in providing transport from one site of a school to another site of that school where the school is not located wholly on one site.
- The cost incurred in providing transport from one school to another, or in an educational establishment which is maintained or assisted by a local education authority.
- The cost incurred in securing the provision of board and lodging where the board and lodging is necessary for education provided at the premises of the school and the education cannot otherwise be provided by the authority for the pupil.

the Government to impose charges of some grant.

Mr Jack Simw, the shadow education spokesman, said: "This is the first step on the slippery slope to fee-paying in state schools," a sentiment echoed by the National Union of Teachers. The deputy general secretary of the National Confederation of Parents' Teacher Associations, Mr James Hammond, predicted that the children of rich parents would soon be receiving a better education than those of poor parents.

Comments to Mr P. Swift, Schools Branch 3, DES, Elizabeth House, York Road, London SE1 7PH. Closing date: November 30.



No charge: books and materials must be provided

Labour tempted toward populist line

by Jeremy Sutcliffe

The Labour Party's search for new ideas in education to counter the onslaught of the Government's planned reforms is provoking some ill-feelings among its own supporters.

This became evident on Monday night at a meeting organized by the West Midlands Regional Education Alliance – part of an umbrella group set up by the TUC to put education in the forefront of trade union debate.

The invited audience was primarily composed of members of the National Union of Teachers and the National Association of Schoolmasters/Union of Women Teachers, as well as parents, local Labour politicians and members of the wider trade union movement, and the most predictable message to emerge was that the Opposition now believes the Government is capable of anything. Mr Baker, in their eyes, is the new Faust, with Mr Thatcher playing Mephistopheles or the Devil incarnate.

According to Mr Neil Fletcher, leader of the Inner London Education Authority and education spokesman for the Association of Metropolitan

Authorities: "No one should be in any doubt that Mrs Thatcher is serious about the wholesale opting-out – with financial inducements to persuade parents and schools to grab the money and run. If Mr Baker stands in her way she will remove him."

Mr Gordon Green, former president of the NUT: "The Government is deliberately setting out, through the tabloid press, to undermine public confidence in education. They want it to become the public's view that the state education service is failing the children so that they can then go ahead with the wholesale privatization of the education service."

This, and much more from the platform, shocked and surprised this audience, many of whom were committed and knowledgeable activists in the Labour movement. That alone was an indication of how far things have moved since the general election.

But the eloquent words and phrases come easily to the likes of Messrs. Green and Fletcher, both of whom know how to be popular. Where they part company is over how to fight the



Gordon Green, leader of the NUT

Government's education proposals.

Mr Fletcher, already in hot water over his recent support for magnet schools in the inner cities, bravely (or foolishly, depending on your view) expanded on his new thesis that Labour must search for populist poli-

cies if it is to wrest the initiative from the Tories.

Even comprehensive schools have lost their sanctity. "I do not believe that comprehensives are now at the stage where they are above criticism. That doesn't mean to say we want to bring back grammar schools, we do not."

But Mr Green, speaking for the NUT leadership, is concerned at Labour's new direction. "We believe there are dangers in taking too much of a populist approach," he said. Instead, he believes Labour, and the unions, should take the high ground, defending the principles of free education and equal chances for all in a properly-resourced service.

The NUT is gearing up for a high-minded, non-disruptive campaign against the Baker Bill, linking up with the churches, parents, L.E.A.s and other unions through the Council for Local Education Authorities, which has already set up a standing conference to try to reach a common accord.

Moreover, the union is planning to recruit several more MPs to put their

case in the Commons. In recent years, the union has stuck to the Labour backbenches to fight their Parliamentary corner, but are now considering recruiting Alliance MPs. Nevertheless, they seem to be set against employing Tory MPs as consultants.

One of the strongest arguments for the populist approach to education policy came from Mr David Savage, chairman of Labour-held Dudley education authority.

For too long, L.E.A.s and teachers had stuck to the idea that comprehensives are the only answer, allowing Mr Baker to exploit the real and growing concerns of parents, he argued. Even city technology colleges struck a chord among parents who believed something must be done about children who had talents and expertise.

Mr Savage then took the same line as Mr Jeff Rooker, Labour's housing spokesman, who recently admitted his party had no housing policy. Labour had no education policy either to put as an alternative to the Tories. What was needed was a policy to take it forward over the next 10 years, he said.

Oxfordshire offers an alternative

by Linda Blackburne

Oxfordshire County Council has put forward an alternative approach to the Government's proposals for education reforms.

It has sent Mr Kenneth Baker its own consultation documents on a system it calls "externally-mediated school evaluation" – a scheme it has used for about eight years and would like to see put into practice nationally.

Under the system, the local education authority would produce and discuss plans for the curriculum; teacher assessment; resources including local financial management; school effectiveness; diagnosis of children's progress and explanations to parents and the evaluation of all these items.

Mr Tim Brighouse, chief education officer, says of the idea: "Such an answer would certainly be less of a strait-jacket and wholly consistent with good management practice in the private sector of education and business."

He would like the scheme to run parallel to the Government's proposals, or preferably recast the proposed legislation to establish the Oxfordshire alternative on a national basis.

Oxfordshire, which has a politically-hungry council, voted by a majority to put forward the idea – the Alliance and Labour groups combining and some Conservatives abstaining while others counted-opposed.

The council has also forwarded a large batch of letters from parents, governors and teachers on the education proposals, to the Education Secretary.

Scores of letters had been received after parents were leafleted on the proposals. Mr Brighouse said it was the greatest response he has had on any subject, including school closures, during his 10 years in the job.

The parcel of letters also contains a petition from more than 200 parents at Wood Farm estate, where there are a large proportion of council homes and single-parent families. They object to the lack of consultation time, the amount of power concentrated in the Education Secretary's hands rather than Parliament, the national curriculum, testing, and the dangers of less parental choice through opting out.

Mr Brighouse had just received letters from another 35 parents. "It is interesting to see the public reaction when it is actually consulted," he said.

Mr Brighouse's plan for a local educational trust received a split vote and has been dropped. The scheme (YES, September 11) involved setting up single education trusts for groups of schools. Mr Brighouse argued they would be fairer than grant-maintained schools and would avoid the "ghetto" of the Government's proposals.

'The Gas Billing System' is a perfect case study of commercial application for the GCSE examination in Computer Studies. Based on a fictitious organisation called 'Capital Gas', it is a simulation of a gas billing system, in which the student assumes the role of a member of the Company's staff, or a customer, and explores the workings of the billing system.

The teaching pack contains 1 disk, a 20-page Teacher's Guide (including seven masters for worksheets) and one 40-page student book.

The student pack contains 5 copies of the student book. This is designed to be motivational. Written in a friendly, informal style, it is heavily illustrated with photographs, computer printouts, flow charts and cartoons.

Versions available:
BBC Disk 40T Micro (Model B, B+ Master 128) Stand alone Cat No 83/1
RML 380Z/Link 480Z (SD) Disk Stand alone Cat No 83/2

British Gas

ENERGY IS OUR BUSINESS

Price per teaching pack:
Both versions £37.20 (inc. VAT)
(Payable on disk only)

Student pack, containing 5 copies of the book: £18.95

To order, fill in the coupon below and send to:
British Gas Education Service, PO Box 46,
Hounslow TW4 6NF.

Please send me (state quantity and format required):

teaching pack(s).....

Please send me (state quantity required) student pack(s).....

I enclose cheque/postal order/local authority requisition for £..... (*delete as appropriate) payable to British Gas plc.

Name:

Dept:

School:

Address:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

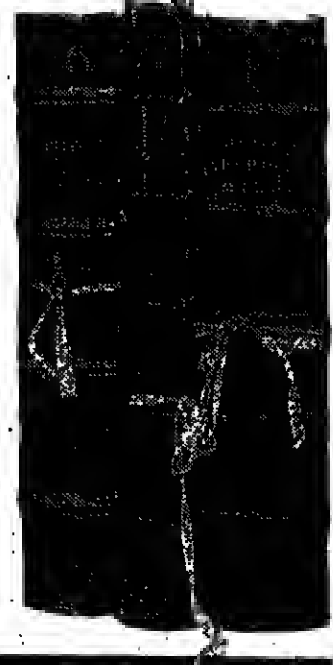
.....

.....

.....

THE TIMES Darker blues

As the new Oxford term opens, *The Times* looks at the famous old university's growing financial problems, with the Bodleian's books coming apart at the bindings and a disturbing number of academic posts left unfilled.



... and regularly in *The Times*, Bernard Levin on the way we live now, John Clare on education, Irving Wardle at the theatre, Frances Gibb on the law, Philip Howard on words, Jane MacQuitty on wine, Geoffrey Smith on politics, Peter Ackroyd on books, Barbara Amiel's viewpoint, Kenneth Fleet on finance, the humour of Mel Calman and Barry Fantom, the unique *Times* crossword ... and much more.

THE TIMES

A lion among paper tigers (25p)

Submissions on the Government's consultation documents for the Great Education Reform Bill continue to flood into the DES offices even after the official deadline for consideration has expired. On this page, TES staff summarize the arguments over the proposed national curriculum, religious education, and further education

DES postbag fills with disquiet

NATIONAL CURRICULUM

Aristotle once remarked "how many a dispute could have been deflated into a single paragraph if the disputants had dared to define their terms."

The point can be applied to the current debate about Government proposals for the national curriculum. For if the responses to the recent consultation document are anything to go by, Mr Kenneth Baker has singularly failed to make his intentions clear. It is a dilemma. The Education Secretary appears reluctant to be precise until the subject working groups and other proposed bodies have reported. Many respondents, by contrast, seem to feel unable to comment fully until they know the whole story.

During the consultation period there has been little more than generalized, if very lively, debate. The written responses, 5,000 of which arrived at the Department of Education and Science last week, do not seem to add much to what has already been said.

The proposals to test children at 7, 11, 14 and 16, have aroused considerable disquiet, even among the parents Mr Baker so wants to impress.

The strength of feeling is perhaps best illustrated by the first topic of the School Curriculum Development Committee's submission, given that most SCD members are Government appointees presumably hoping for places on the new National Curriculum Council.

Despite the intensive work done in relation to GCSE, it is by no means certain that the art and science of assessment and testing is advanced enough to achieve what the consultation document expects it to do.

Many respondents fear the testing proposals could lead to lower standards, narrow the curriculum and encourage ill-informed comparisons of teachers and schools.

A statement issued yesterday by the major associations representing maths, English and science subjects at the core of the proposed national curriculum - warns that testing aims conflict and that the proposals take "no account of the complex nature of learning".

Moves to test younger pupils have attracted particular comment. The SCD says that "at seven, or thereabouts, it seems that diagnostic assessment might be profitable for some but that any formal testing of the whole cohort would be damaging". Testing at 11, when most children are changing school, "reduces the likelihood of adequate remedial work where this is necessary", it adds.

The Government's interpretation of "foundation subject" has led to calls for the Education Secretary to clarify whether subject categories will serve as pegs on which to hang objectives or as units for the organization of teaching.

The Trades Union Congress says the list of foundation subjects "reads like a grammar school curriculum of 30 years ago". Voicing another widely felt concern, it claims that single-subject working parties geared to specific attainment targets and testing will militate against a cross-disciplinary approach.

The "subjects" issue has also provoked those concerned with primary education who cite evidence that basic skills are best learnt when applied across the whole curriculum.

"It would be retrograde to return to the compartmentalized primary education of earlier years," the SCD warns. The committee wants a task group set up to look at overall framework for the national curriculum including the area of cross-curricular themes.

There is plentiful debate about the foundation subjects themselves. Are there too many, how appropriate are the suggested time allocations, and will other subjects be forced out? What does "technology" mean, and what will happen to initiatives such as the Technical and Vocational Education Initiative and the Certificate of Pre-Vocational Education?

How tightly will subject areas be defined and how much teacher flexibility will remain? And what will be the effects of diminished choice and more rigid timetabling on pupil enthusiasm and staffing resources? The Secondary Examinations Council says it "cannot emphasize too strongly" the importance of initial and in-service training. Several submissions concentrate on

MAIN PROPOSALS

- Attainment targets to be assessed at ages 7 (at threeabouts), 11, 14 and 16 by classroom assessment and externally-set tests.
- Repeal of the Secondary Examinations Act and the School Curriculum Development Committee by two statutory bodies - a School Examinations and Assessment Council and a National Curriculum Council.
- Government powers to specify qualifications for compulsory-age pupils and a reserve power to regulate courses and qualifications for full-time 16 to 19-year-olds in schools and colleges.
- Presentation of pupils' results to their parents and publication of scores by school, i.e.s. and for the country as a whole.
- Years 4 and 5 education of curriculum time: additional subjects, eg for GCSE, might include (10% of timetable): science, second modern foreign language, classics, home economics, history, geography, business studies, art, music, drama, religious studies.

Power shift

FURTHER EDUCATION

College lecturers and their employers are at a loss to understand how they are supposed to make the Government's proposals for the reform of further education management work.

Superficially, the plan in the consultation document, *Maintaining Further Education: Financing, Governance and Law*, is for a simple shift of some powers from local education authorities to the colleges.

Three key proposals are for new governing bodies, with at least half the representatives coming from "employment interests", more financial freedom for colleges, and greater powers for governors including the employment and dismissal of staff.

A constant theme runs through the responses to that to achieve this, however, the Government must strip I.e.s. of considerable financial power over colleges while leaving them with the strategic role of overall further education provision.

In the words of NATFHE, the college lecturers' union, the plans are "inequitable, undemocratic" and "probably unworkable". The same message in different words comes from the Association of County Councils and Association of Metropolitan Authorities.

The third key proposal to give governors control over hire and fire of staff causes the greatest cries of incredulity. NATFHE said that since I.e.s. must pay for decisions leading to premature retirement and dismissals, it was "power without responsibility".

With similar considerable disbelief, the AMA said: "Governors cannot dismiss staff they do not employ." And the ACC warned that planned safeguards "against unreasonable costs" were "impossibly weak" and "redeployment arrangements would become impossible" at a time when changes demanded considerable flexibility.

Local authorities would be allowed no more than one-fifth of the representatives on the new governing bodies and would be barred from holding the chair; a proposal described by the AMA as "offensive and vindictive".

Moreover, I.e.s. would no longer play a part in the appointment of senior staff. The AMA insists governing bodies should at least make

MANAGEMENT REFORM

- New governing bodies, with at least 50 per cent representation of "employment interests".
- More financial freedom.
- Greater powers over appointment and dismissal of staff.
- Corporate status "in the right circumstances" enabling employment of staff, availing at premises, and responsibility for facilities.

Every colour in the paintbox

RELIGION

The Dewsbury row has focused attention on how Church of England schools educate their growing number of non-Christian pupils. Report by Geraint Smith

"Racism. Institutional racism." Angela Paiter, acting head of Soho Parish School, spits out the words with more venom than she uses of the peep-shows and prostitutes five yards from the gates. She is talking about the Dewsbury case.

For, and for those committed to the development of multi-faith teaching to multicultural areas there is nothing contradictory in opening the gates of a church school to those of other religions, or, indeed, no religion. On the contrary, it is both an enrichment to the school's pupils - nil of them - and an actively Christian thing to do: a step towards a compassionate, tolerant society that sees individuals not stereotypes.

A further, and for those committed to the development of multi-faith teaching to multicultural areas there is nothing contradictory in opening the gates of a church school to those of other religions, or, indeed, no religion. On the contrary, it is both an enrichment to the school's pupils - nil of them - and an actively Christian thing to do: a step towards a compassionate, tolerant society that sees individuals not stereotypes.

Her own 150-pupil school caters for a community in which white Anglo-Saxon Protestants are in a minority and there have been long periods when it has had not a single Anglican pupil.

The 26 Dewsbury parents who are refusing to send their children to Headfield School, where 85 per cent of pupils are of Asian origin, maintain that their opposition is on cultural, rather than racial grounds. But the aim of the multicultural school, according to Mrs Jean Walker, senior school's adviser of the Diocese of London, is "to produce children who understand the culture of their parents, and to respect and value what that is, and alongside that, to produce children who are tolerant and understanding of other people's religions".

Mrs Walker believes that religious education is crucial to that aim. "All



Bread Church: the pupils of one Anglican school in Earls Court have 24 different mother tongues.

instruction for the Muslim children. Instead, on Saturdays, the premises are used by an Islamic school.

Nether does it prepare children for confirmation. Other agencies exist for that. Yet the school visits the High Anglican Church twice a year, and holds a simplified form of Eucharist every Thursday, in which children are invited to respond - but not to take.

On Mondays there are short talks on themes relevant to the children - perhaps examples of good endeavour - and children are asked to think about the relevance of the teaching in relation to God. On Tuesdays, the pupils make their own assemblies. In many they are, says Mrs Abbot, thanking God for life. On Wednesdays the peripatetic teacher calls and the service concentrates on praise through singing and music. And on Friday, there is a story, a song, and a welcome for new children.

Yet the Muslims and Hindus keep coming. And while its philosophy is not to sell Christianity short, the school celebrates and explains the major festivals of other religions. Last year, there was a project on the Chinese New Year, in which parents gave a presentation. In the summer, the children worked on the Hindu epic of Rama and Sita, every one helping in the construction of a giant puppet.

The keyword is respect, says Mrs Abbot. "You have to think about that. Tolerance is positive. It can be a bit comfortable, and a bit smug. I am asking for a bit more than that."

School trips, too, are important. Quite apart from the need to get

children out of their overcrowded surroundings, they serve a religious purpose. "It puts them into situations where they can see the natural world and feel awe and wonderment at God's work. We would be doing them a great disservice if we did not give them this sense of awe," she says. "Many non-Christian families prefer to send their children to a school in which there is a religious atmosphere."

Certainly the Muslims take a full part, even in the school's religious life. At Christmas, there had to be two performances of the school play to accommodate all the parents. The Muslim parents are quite happy that their children attend church. It is the experience of corporate worship that is important, Mrs Abbot believes.

She immediately challenges any question about "English culture". "I have not been faced with the question of whether we would skip on that. If parents did question me on that I would have first of all to define what they meant."

Another phrase, "the Anglican tradition", gets pretty short shrift, too. "What is that? We take children from high Anglo-Catholic to almost evangelical churches. The difference is phenomenal. Yet they are both under the umbrella of the Church."

"When English parents come here I tell them exactly the same as I tell the Muslim parents. I also tell them that we are very fortunate in having children from so many different countries, faiths and backgrounds and that this is very enriching."

Of course, there are some difficulties. She would like to have more Asian teachers on her staff. But she has found that religious instruction is less of a worry to parents than food. And that is easily solved. If they don't want pork, it will not be forced down their throats.

That, too, is the essence of the approach to religion. The ethos of Christianity pervades the school, but its dogma is notably absent.

And now for a brief prayer

As more and more folk (in the affluent West) think less and less about God, religion in this country's schools over the past three decades has been pushed nearer the door.

Scripture gave way to religious instruction and that to religious knowledge, which yielded to religious education which itself here and there has been flattened out into several strands labelled personal or social or moral or human studies.

Nothing in the consultative document proposal will impede this rolling-away from the spiritual; indeed, they will accelerate it. This is the view of the entire religious education establishment.

As it stands, RE must jostle among 10 other subjects for a place in the 10 per cent of syllabus time that is left after the eight foundation subjects have spread themselves over 90 per cent of the timetable. Cries of protest are heard from the clerically-collared or their spokesmen in both Anglican and Roman Catholic offices.

Mr Colin Alves, secretary of the Church of England Board of Christian Education, pointed out last week that the legislative fall-back of "it has to be there" in no way matches Mr Baker's assertion in an earlier letter that religious education should be given "the significance it deserves within the curriculum".

The board's response to the proposals sent last week adds: "That significance can only be properly reflected by the placing of the subject among the foundation subjects with the same type of central support available to it."

Langusling among the also-rans, it will not be seen as a "proper" subject, say the experts. It will be less likely to be chosen as a GCSE subject and that will mean even fewer future teachers of RE than the inadequate number we already have.

Mr Derek Jay, head of RE at Filton High School, Bristol, reckons that to be taken seriously, a subject should have at least 70 minutes a week, be accompanied by homework and be examined regularly. As the proposals stand, one teacher could have to deal with as many as 1,200 pupils a week.

One teacher should deal with more than 350 pupils a week.

There is another singularity about RE. Mr Alves points out that in county schools, its content is controlled through a syllabus which has to be agreed by a conference separate to each local authority, representing denominations, teacher unions and the authority. But in the RE proposals, any school which "opts out" and becomes a "free school" will not be required to follow the policy of the I.e.s. So it is important the subject comes within the scope of the subject working groups and the yet to be formed National Curriculum Council and Schools Examinations and Assessment Council to ensure the RE syllabus is still "agreed".

The other worrying element the Anglicans see is the scant importance attached to "cross-curricular themes". The Education Secretary is accused of having already dismissed them because they will "log" the system. Yet they are essential in contributing to the area of experience and competence identified in a curriculum study going back 10 years.

This dismay is shared by the Roman Catholics. The Rt Revd David Konstant, Bishop of Leeds and chairman of the Catholic Education Council, told a conference last month (TES, October 2) that Mr Baker's approach lacked any reference to the school's role in developing moral and spiritual values.

Yet, the cynic may ask, what are the children going to learn about? They have their own aided schools with church governors in the majority and though the proposals require them to follow the national curriculum, there will still be room for more than a period a week of religious education.

True. But out of some 4,500 secondary or deemed secondary schools, the Roman Catholic share of aided schools is only about 400, while the Anglicans have fewer than 120.

As for the repeated public assurances by Mr Bob Dunn, who seems to be the under-secretary of state for scripture (his wife being an RE teacher), that there is no intention to alter the legal protection RE has, the Association of Catholic Teachers complains the DES view has long been that RE is a legal rather than an

Sue Surkes

Ian Nash

1944 EDUCATION ACT

28 (1) Subject to the provisions of this section, the school day (a) in every county school and in every voluntary school shall begin (b) with collective worship on the part of the pupils in attendance at the school, and the arrangements made for that purpose shall be for a single act of worship attended by all such pupils unless, in the opinion of (d) the local education authority or, in the case of a voluntary school, of the managers or governors thereof, the school premises are such as to make it impracticable to assemble them for that purpose.

(2) Subject to the provisions of this section, religious instruction (a) shall be given in every county school and in every voluntary school.

CONSULTATION PAPERS

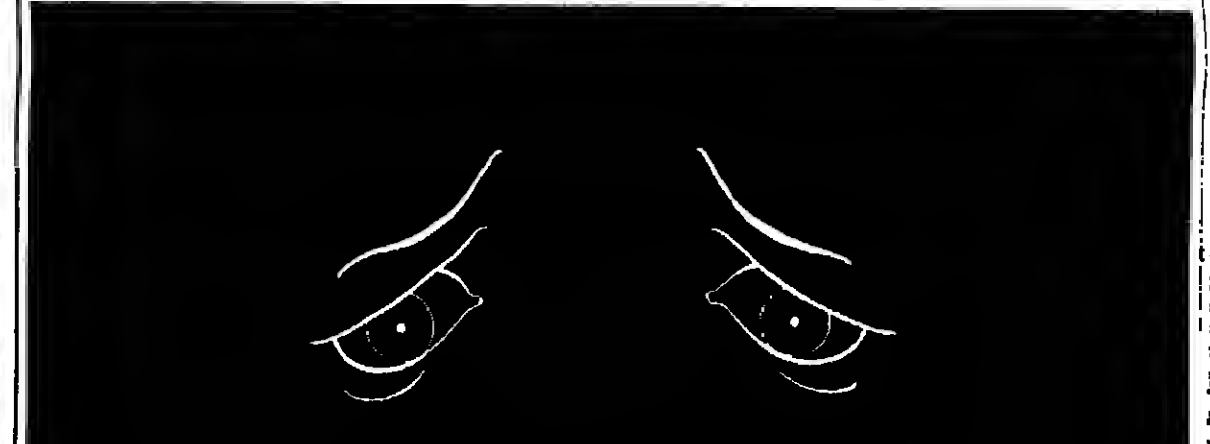
17 Religious education is already required by statute, and must continue to form an essential part of the curriculum. There will be time available beyond that required for the foundation subjects for religious education, and also for other popular subjects, such as home economics, which are taught by many schools and will continue to be a valuable part of the curriculum for many pupils in the secondary or well so primary phases. I.e.s. and governing bodies of schools will determine the subjects to be taught additional to the foundation subjects.

educational part of the curriculum... it is safe on the statute books; it is not safe in the schools."

And it points out that the 1944 Act laid the provision of RE upon the local education authority. Yet the variety of legislation currently proposed gives the impression the authorities cannot be trusted with education. "The one statutory subject that I.e.s. are to be entrusted with (presumably because it does not matter) is RE."

For a long time, Muslims have not bothered to conceal their dissatisfaction with the religious education offered to their children. Frankly, they would like them to be taught Islam and only by Islamic teachers. But of the new proposals, the Muslim Education Trust, set up in 1965 to protect the interests of Islamic parents and children, said that the scant importance indicated for RE amounts to "a real

Bert Lodge



In the dark about school governors and governing? The TES will lighten your darkness.

New legislation has given parents and governors more powers and responsibilities. A major new eight week pull-out series covering every aspect of school governorship starts October 23rd.

Make sure of your copy. Order it today from your newsagent.

The TES. Every Friday 60p.

THE TIMES

Educational Supplement

Not even ministers seem completely sure what the new national curriculum will entail. Meanwhile, young visionaries from the Confederation of British Industry think it is all going to be out of date, anyway

Confusion grows over status of careers lessons

Mrs Angela Rumbold, Minister of State for Education, this week stoked the confusion and anxiety over the future of careers education. She said it would be left to schools to cover in the time outside the compulsory curriculum.

The statement appeared to contradict an assurance given by a senior Department of Employment official that careers education would be included in the "centrally determined" area of the curriculum, and there are indications that Mrs Rumbold may not fully understand what her own plans have in mind.

The uncertainty over the Government's intentions, and concomitant fears among teachers and careers advisers that the subject will be squeezed out of the timetable, result from the Government's curriculum discussion paper, which does not mention it.

The dismay and anger of the careers specialists at this omission is heightened by the fact that only a few months ago DES and DE ministers jointly launched a highly publicized "national initiative" to make careers education a high priority in every school.

When this apparent inconsistency was pointed out at the Institute of Careers Officers conference last month, Mr John Dewsbury, head of the DE's careers service branch, explained that careers education had not been overlooked, but was to be centrally determined, in line with the importance ministers placed on the activity. He offered the view that the decision not to state this in the discussion paper might have been unwise.

But at a press conference on Monday to launch a new booklet and video on careers choice, Mrs Rumbold said that careers education would not be part of the foundation curriculum, and bracketed it with home economics as subjects for which schools would be expected to find time. She stressed the importance of careers teaching, and said it was almost inconceivable that schools would not find time to cover it properly.

Despite Mrs Rumbold's statement, the DE was still insisting this week that careers education would be included in the compulsory curriculum. "It won't be one of the main subjects, but it will be a cross-curricular theme woven into



Uncertain future: will careers be taught across the national curriculum or be pushed outside it?

the main examination subjects," a spokesman explained.

The DES press office at first insisted that whatever Mrs Rumbold had said must be right. But after hurried consultations within the department, a senior spokesman conceded that the DE's version of the Government's intentions accurately represented "a rather complex situation", and that it was what the minister had really meant.

But if this turns out to be the definitive statement of the Government's plans it is unlikely to placate the careers lobby. Even as Mrs Rumbold was busy muddying the issue, Mr Tony Evans, president of the National Association of Careers and Guidance Teachers, was already attacking the notion that careers education could be adequately covered in the way that the DE describes.

Announcing that the association's response to the discussion paper had expressed bafflement at the apparent turnaround in Government thinking on the priority to be given to careers education, Mr Evans pointed out that research had already demonstrated the difficulties of delivering it through other elements in the curriculum.

"In any good guidance system, subject staff certainly have a role to play, but their work will need to be co-ordinated by a specialist," he said. The National Institute for Careers Education and Counselling,

which carried out the research on integrating careers teaching into the curriculum - a study partly funded by the DES - has itself told the Government that it is very difficult to achieve this effectively. The institute has suggested that such an approach should be accompanied by a separate programme of social, personal, and careers education of the sort many schools have developed in the past few years.

A number of other measures which Mr Tony Watts, the institute's director, says will require considerable resources, are put forward as necessary if the Government is to pursue its approach without careers education being "irrevocably undermined".

But the continuing uncertainty about what the Government really intends raises a more immediate issue than these broad considerations of the future of careers education, Mr Dermot Dick, spokesman for the Institute of Careers Officers, pointed out on Wednesday.

As part of the initiative launched in April, all local authorities are under an instruction to submit by the end of the year outline plans and policies for improving their careers programmes. "They are now faced with an insoluble practical problem. How can they decide what they are going to do without knowing what the Government itself intends?" Mr Dick demanded.

Action plan for the 21st century

The rising stars of Britain's business world have produced their own formula for a national curriculum, and it is a direct conflict with the Government's proposals.

A team of under-35s, drawn by the Confederation of British Industry from leading companies, this week published its action programme to fit Britain for the 21st century.

The radical proposals for education and training reform are based on the introduction of a broad-based national curriculum for the compulsory school years. It should concentrate on basic skills, says the group.

The group wants "a recognized school-leaving assessment" of literacy and numeracy, a grounding in computing, an international trading language, science and technology, engineering design and basic business principles.

The most startling proposal, however, is for an end to the serving in education. The programme says: "The progress of students through school and college should depend on their demonstrating a level of ability in a discipline or skill - not simply on age. Processing students through set academic years with examination results merely recording success or failure should stop."

However, the group agrees with the Education Secretary on the need for teacher review and appraisal, saying that although it realizes the difficulties of assessment, more responsibility should be given to heads in this field. Schools are warned against the traditional concept of competition which aims merely at beating a rival. The group attacks this as destructive and irrelevant both of school and in business. "The difference between competition and competitiveness should be understood and addressed," it says.

The programme also calls for an end to the direct funding of higher education institutions, and for the money to be used to finance students instead. Colleges, universities, and polytechnics would have to attract them in order to earn their fees.

Edited by Mark Jackson

TVEI wins universal acceptance

The Technical and Vocational Education Initiative, which began as the first big battleground for control of the schools, has finally won universal acceptance. A handful of authorities who have been holding out against the scheme for five years have decided to participate.

The 12 authorities were offered a last chance to join before the original pilot programme is turned into a permanent national scheme, for all schools. All have put forward proposals for preparatory programmes which will enable them to catch up with the experience already gained by other TVEI schools.

The 12 - Kirkcaldy, Leeds, Salford, Brent, Haringey, ILBA, Waltham Forest, Orkney, Shetland, Hounslow, Liverpool, and Oldham - had shunned the pilot programme for a variety of reasons, from the ideological or pedagogical to the mundanely practical. Originally part of a majority of authorities who resented the introduction of the MSC-funded programme, the 12 found themselves increasingly isolated as the rest of the country warmed to it.

New work planned for the coming year includes an expansion of leadership training courses for teachers, following successful trial work with

Inner-city jobs boost

by Ian Nash

Mr Kenneth Clarke, the Industry Minister, has called on the vigorously outspoken Industrial Society to expand the Head Start scheme aimed at promoting enterprise among inner-city pupils and school-leavers.

The Industrial Society, Britain's most experienced school liaison body, does not shy away from criticizing the Government. Disagreements came to a head in March when its director, Mr Alistair Graham, urged ministers to abandon the policy of setting up city technology colleges.

But the attack, which led to a radio confrontation between Mr Graham and Mrs Angela Rumbold, Minister of State for Education, has done the society no harm as the Government and Manpower Services Commission have now asked it to set up task forces in four areas and step up the work of the other six.

In 12 months, under the Head Start programme, the Industrial Society has involved 210 leading companies in inner-city projects for more than 2,500 fifth and sixth-formers and helped 75 youngsters achieve self-employment through the Head Start in Business scheme.

New work planned for the coming year includes an expansion of leadership training courses for teachers, following successful trial work with

heads and deputies, and a programme to encourage schools to develop their own self-sufficiency training course. Task forces have already been established in Bristol, Leeds, Leicester, London (which has two), and Middlesex. New areas identified for action are Spitalfields in London, Handsworth in Birmingham, Moss Side in Manchester and Hartlepool.



Alistair Graham, Industrial Society director receives Government support for Head Start scheme.

Young radical with a taste for the ancient

GREECE

Helena Smith on the Education Minister's attempt to reinstate classical Greek in the curriculum

Mr Antonis Tritsis, the young and radical Education Minister, is not a popular man among Greek schoolchildren this year. He has pledged to extend the school year - Greece is renowned for having one of the shortest in Europe - and has stirred up debate with a controversial decision to reinstate ancient Greek in the state school curriculum.

Mr Tritsis is convinced that study of classics leads to clarity of thought. "By learning ancient Greek, pupils will have a much better understanding of our language. It is clear that children need help to organize their minds, learning ancient Greek language and grammar is an infallible means of doing this," the Minister said.

But the teachers' union in Athens has said the Minister's plan will only be acceptable if teaching methods are revised.

"We're no longer willing to teach ancient Greek from original texts. If it is to be brought back then it must be taught in translation for it is after all the teaching of ancient civilization," said Mr Christos Doukas, president of the teachers' union.

Ancient Greek was dropped from the curriculum in 1976 on the grounds of being a dead language and irrelevant to modern educational needs. Despite its similarity to modern Greek, pupils found it a difficult

language to master. They complained that excessive grammar exercises and too little emphasis on ancient civilization made lessons excruciatingly dull.

But less than four hours' drive to the south of Athens, youngsters have enthusiastically received a state-funded language programme which aims to revive a dialect directly descended from ancient Greek.

More than 6,000 people living in the region of Kynoussa, until 30 years ago an almost completely isolated part of Greece, converse in "Tsakonika" every day. Most of them are elderly and their grasp of modern Greek is sometimes so weak they have difficulty understanding their grandchildren.

"My grandmother only speaks Tsakonika, she doesn't understand the television and my mother has to translate for her," said 11-year-old Stelios Kovis, one of 400 children learning the unique dialect. Father Michael Alevis, teaching



All Greek: Father Michael Alevis, Tsakonika language teacher, with pupils

the dialect outside school hours, said he was surprised by the local children's enthusiasm.

"More than 200 children aged between 6 and 17 attend my twice-weekly Tsakonika classes," he said.

"I was amazed by the turn-out. My teaching methods are very traditional. We concentrate on grammar but this doesn't seem to have put the children off. Yet, like most children, they don't want to learn ancient Greek in school

and say it's far too dull," he added. Dullness is the problem Mr Tritsis now has to tackle. Increasing pressure by teachers to revamp teaching methods forced him to delay his plan to reintroduce the unpopular subject at the start of the academic year this September.

Joined by a committee of experts, he is now looking at ways of enlivening the once dreary ancient Greek syllabus.

A new body in the education anatomy

BELGIUM

The language college which opened in Brussels last month is the first of its kind in Europe, Jane Marshall reports

Vesalius, Brussels' newest college, founded just two weeks ago, marks a complete break with Belgian and European educational custom. It is the first English language college in continental Europe linked to an established university, and, in a radical departure from Europe's tradition of early specialization, it is modelled after the smaller American liberal arts colleges with their broadly-based education.

Named after the Flemish 16th-century Renaissance physician, Andreas Vesalius, known as the Father of Anatomy, the college is part of VUB, the Flemish free university of Brussels. Unlike other European higher education institutions, it works on a credit system, offering four-year Bachelors' degrees in the arts, sciences and engineering, in which students follow courses leading to specialization to 60 per cent of their credits, and it places emphasis on interactive teaching and personal study.

According to Professor Franz Glingens, the dean, an important reason for the creation of Vesalius is the need to prepare for the 21st century when, he says, university-educated people will need a more general training.

The college is also VUB's response to the increasingly international community living in Europe - where there are more than 140 international schools - and especially Belgium, where the headquarters of such organizations as the European Community and NATO are located, as well as a large and expanding multinational business community.

While fees at Vesalius are higher than at other Belgian colleges - its different teaching system disqualifies it from receiving Government subsidy - it

can still offer a less expensive, though comparable, education to Europeans and others from further afield, wanting to study higher education in the United States. Fees cost 169,000 Belgian francs (about £2,660) for one academic year, which is organized in two semesters.

"We can keep comparatively low fees because we are part of the VUB," explained Raoul Van Esbroeck, assistant dean for student affairs. "We don't have to buy materials for laboratories and books."

Even before it opened, Vesalius entered an agreement with Boston University, which has undertaken to help the college develop its programme, and has provided a full-time co-ordinator to work in Brussels. Students graduating from Vesalius - they will emerge with a fully-recognized VUB degree - who want to continue with postgraduate studies are guaranteed a place at Boston, with full credit transfer.

For this reason, and because it is aware of its own high academic reputation world-wide, VUB is highly selective when accepting candidates for Vesalius; only about half those who applied for September were admitted. As well as higher than average entrance qualifications (judged by the US Scholastic Assessment Test or the American College Test), non-native English speakers must show their proficiency in the language, and successful candidates must also speak at least one of Belgium's national languages - Dutch, French or German.

Of Vesalius' first students, the 46 who started this month, the largest group, numbering seven, come from the United States; but all together they are from 28 countries.

Eventually the college hopes to cater for up to 1,000 students, and is planning to offer about 400 courses with a dozen or so majors in the humanities and social sciences, natural and life sciences, engineering, and also general studies.

Further information about Vesalius College from Dr Raoul Van Esbroeck, admissions office, Vesalius College, VUB, Pleinlaan 2, 1050 Brussels. Telephone, (02) 641 2111 or 641 2521.

Schools left disabled by Jaffna fighting

SRI LANKA

DB Udelegama reports on the high cost of rebuilding the war-ravaged education system

Recent fighting between militants and Sri Lankan government forces has damaged or destroyed more than a third of the schools in the Jaffna peninsula.

The Jaffna peninsula, the heartland of the Tamils, and, to a lesser extent, the eastern province have seen bitter encounters between the opposing forces since the beginning of the year. In all, 183 of the 478 schools were affected by the conflict.

The fighting ended this summer with the signing in Colombo of a peace accord by Mr Rajiv Gandhi, the Prime Minister of India, and Mr Junius Jayewardene, the President of Sri Lanka. However, a score of killings in intercommunal quarrels have gone on between rival groups of Tamil militants, despite the presence of an Indian peace-keeping force of more than 7,000 troops.

Schools island-wide reopened last month, and both Mr Rajiv Wickremesinghe, the Minister of Education, and Mr Lionel Jayatilake, the Minister of Education Services and Rehabilitation, toured some affected areas and called for an official survey of the damage. At present the National Task Force in overall charge of reconstruction estimates repairs of all the damage over the past four years would cost eight billion rupees (£16.6 million).

Mr H N Fernando, the general secretary of the Ceylon Teachers' Union, who visited several places in the north after the cessation of hostilities, said: "Educational institutions which have been serving generations have been completely destroyed."

A newspaper has reported that more than 200,000 pupils in the North and the East have had their education interrupted by the conflict; of some 1,416 schools, as many as 918 did not function at various times. More than a thousand students in the Jaffna peninsula are reported to have requested the Commissioner of Examinations to hold a special GCE A level examination for them as they would not be ready for it in December or January, when it is usually held, because the fighting prevented their preparation.

The authorities are undaunted by the fighting. Mr Jayatilake favours a return to a local tradition - holding classes outdoors in the shade of a tree. Mr E L Wijemane, the secretary to the Minister of Education, said that battle-zone schools were being given highest priority. Apart from the urgent repairs and temporary shelter, double-session schools have been started. Saturday classes have been organized and some of the bigger schools have been asked to take in more pupils temporarily.

During the fighting a great number of teachers left their posts and refused to return, but with hostilities ended, they are eager to get back to work. Recruitment of new teachers is also said to be under way.

Travel

Paris Map

For a free power map of Paris 24" x 17" charmingly illustrated by André together with our booklet on individual inclusive holidays to that beautiful city, please write to: Time Off Ltd., Chester Close, London SW1X 7BQ.

Courses

Qualified teacher...

but feeling out of touch with

- new exams?
- new technology?
- equal opportunities?

Expand your career opportunities through Middlesex Polytechnic's new one year full-time

In-Service Diploma in the Teaching of Home Economics

As a teacher in this shortage area you will help pupils face the real life issues they meet every day. Remember - the real world and real living are at the forefront of today's work in Home Economics.

Further information: Ruth Serner, (ref: C357B), Middlesex Polytechnic, Trent Park, Cockfosters Road, Barnet, Herts EN4 0PT. Telephone: 01-440 5181.

Middlesex Polytechnic

ESPERANTO CENTENARY 1887-1987

Special Invitation to Language Teachers:

a week-end course for beginners in the International Language at the Esperanto Hotel and Conference Centre, 2 Oxcliffe Rd, Heysham, Morecambe. November 6-8, 1987.

The Esperanto Teachers' Association will pay the expenses of any language teacher taking part in this course.

Details from Gerth View, Bolton, Appleby-in-Weetmoriend, Cumbria CA16 6AL. Or phone 076 83 61486

Courts support home side in legal battles

UNITED STATES

Bill Norris reports on how the law is slowly changing to accommodate parental choice

More and more American children, their parents disenchanted with the public schools, are being educated at home. Estimates of their numbers vary, from a conservative 120,000 to as many as a million, but there is general agreement that the practice is becoming more common.

Although all states have compulsory school attendance laws, mostly passed early this century to prevent child labour, these are now being challenged. More than a third of the state legislatures have relaxed their regulations regarding home schooling in the past five years.

Among them is Maryland, where Mary Albritton, chief of pupil services for the Education Department, said this week: "There is a network of home-schooling people around the county, who want this alternative."

They see the nationwide push towards excellence and say the schools are bad. Maybe I can do better at home. We're responding to a request by folks for that choice.

Not all states have been so accommodating, but those which resist are

frequently being taken to court by parents - and the parents are winning. Advocates for the Home School Association have won cases in seven states this year, and Federal suits charging that laws restricting home schooling violate civil rights have been filed in North Dakota, New York, Pennsylvania and South Carolina.

The official attitude of the Federal Education Department to this trend is that it does not have an official attitude. According to a spokesman: "Home schools represents a form of parental choice, and the Secretary of Education and the President have supported parental choice. But the Department has not taken a formal position on the issue."

Nevertheless, there are concerns, and these spring mainly from the problem of ensuring that children taught at home actually do get an education. "As the number of home-schoolers grows, we have an increased chance of seeing abuses, such as parents keeping kids at home and not offering an educational programme," said a Department official.

This risk has become greater with the erosion of the requirement that parents should be licensed teachers. About half the 6,000 Home School Association members do not have more than a High School diploma and would not qualify for certification. But they have been so successful in their plea to be allowed to teach their children at home, made mostly on religious grounds, that only three

states - Iowa, Michigan and North Dakota, still require home teachers to hold a licence.

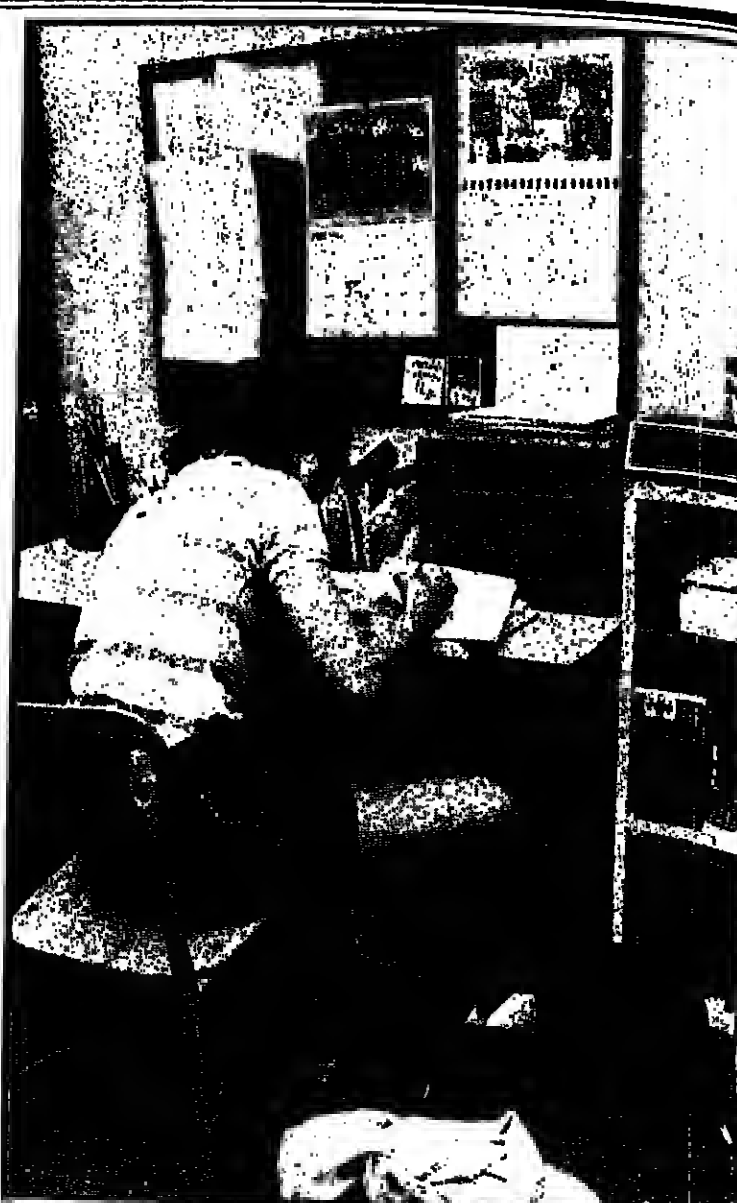
Maryland and Colorado dropped the requirement this year. In Maryland, where parents previously had to follow the public school curriculum, including its mandated textbooks, they now have to do no more than provide a portfolio of each child's work twice a year.

Colorado is slightly more demanding. Home students there must submit to a standardized test each year, and those who fail to reach a certain level may be forced to attend school.

In Texas, the courts have ruled that home schools qualify as private institutions. But private schools in Texas are required to be accredited, and there are problems about extending this to home teaching.

The Texas state teachers' association thinks the rule should be applied. "We believe people can educate their children any way they want, but if there are minimum standards that apply to public schools, then they ought to apply to home schools as well," said a spokesman.

Elsewhere the laws are frequently vague, and it is often left up to local superintendents to decide whether or not to permit a home school - assuming they know that it exists. In remote rural areas, and some not so remote, it is not unknown for parents to keep children at home and simply not bother to educate them. And nobody seems to care.



Stopping in: many states are relaxing compulsory school attendance laws

Board not broken by record strike

The four-week-old Chicago teachers' strike, has broken the record for the longest stoppage in the history of the city's strike-prone schools. Twenty-eight thousand teachers are asking for a 9 per cent rise on their average salary of \$27,900 (£17,200), but the School Board is sticking to its offer of 0.5 per cent. The teachers' union, the IFTS, are being kept from the classrooms.

Elsewhere, although some disputes have been settled, teachers remain on the picket lines in seven states, giving an extended summer holiday to more than half a million pupils.

The most recent walk-out is in Little Rock, Arkansas, where such a thing has never happened before. There, 1,200 teachers went on strike after the School Board responded to the union's 10 per cent pay demand with three offers - none better than five per cent. "Three strikes, and you're out," remarked the union president. In America, the rules of baseball apparently apply to labour negotiations as well.

Steve Clark, Arkansas's Attorney



Teachers picket outside the home of Chicago mayor Harold Washington.

General, describes the strike as a criminal obstruction of a government operation, but so far the union has found a friend in the local Prosecutor, who says: "We're definitely not going to go out and arrest any teachers."

That is the good news. The bad news is that they will probably be fired.

Population move forces primary expansion

KENYA

The Nairobi city education authority is embarking on a massive expansion of its primary education network.

The acute shortage of places which has prompted this action has been blamed partly on parents moving from rural districts to the city in search of better education for their children. The national birth rate, reputedly one of the world's highest, is also seen as a cause.

In 1984, there were 39,000 pupils enrolled in 86 city primary schools. Numbers have risen to 141,000, and though there are now 157 schools, city education planners say this is hardly sufficient to satisfy demand.

In an attempt to solve the problem city commissioners decided to borrow 270 million shillings (£10 million) from the central government for financing public services. Ninety million shillings (£3.3 million) of the loan will be used to construct 15 new primary schools and to expand existing ones.

To augment the Government subsidy, Nairobi residents will need to contribute another 90 million shillings, which according to the city development committee, will have to be raised on a self-help basis.

Estimates from the city education department show that 122 workshops, to be constructed in the existing primary schools, will cost 64 million shillings (£2.3 million) and 126 home science blocks, another 63 million shillings.

Meanwhile parents have been urged to enrol their children near their homes. Several parents have been taking their children miles to schools located in distant areas, a habit which, according to city education officials, must stop if all Nairobi children are to obtain places in the city's primary schools.

Wachira Kigitho

Degree angle

Sir - I had expected that Ian Nash's article "The changing questions" (TES, September 9) would attract comment, but was surprised at the source and nature of the letter "High pressure" (TES, September 25).

We work closely with the Standing Conference on University Entrance and the University Central Council on Admissions, and the Council for National Academic Awards and the Polytechnic Central Admissions System, particularly with the aim of easing the progression of BTEC students who show the motivation and potential to benefit from degree studies.

Mr Scott's quote from *Policies and Priorities into the 1990s* is accurate, but incomplete. Paragraph 36(c) states "that the appropriateness of a programme of study lies principally in its relevance as a preparation for success in studies being important but normally subordinate."

The Business and Technician Council and its predecessors, BEC and TEC, have always recognized that many successful students would wish to progress to degree studies, and have given guidance to colleges accordingly. For example, in collaboration with SCUE and CNA we have introduced a mathematics unit designed for this purpose, particularly for engineers.

We encourage colleges and polytechnics to counsel potential degree students and to give them whatever additional preparation may be appropriate. We have also visited 31 universities and two polytechnics this year to talk with admissions tutors about our policies and practices.

I hope I have clarified BTEC's role for Mr Scott and other readers. To turn to his other points, moderated results have to be confirmed to BTEC by July 15. However, colleges are authorized to confirm individual student results to universities and polytechnics, once results have been agreed by the BTEC moderator in June or early July.

BTEC results are generally more complex than A level results, because they contain more information which is useful to employers, and should be equally useful to admissions tutors once they become familiar with the BTEC system.

I reluctantly accept that some colleges are more helpful than others in assisting students with their UCAS and PCAS applications, and in reporting on their students to potential receiving institutions. This is a matter for colleges, and I join Mr Scott in urging those concerned to do their best for their students, and to make adequate arrangements for the provision of information over holiday periods. As in all fields, there are examples of excellent practice, as well as some poor ones.

For the record, BTEC registers nearly 200,000 students every year. In 1985 some 10,000 students with BTEC qualifications entered degree courses. While these figures confirm our main purpose, I have no doubt that many more of our students are capable of progressing to degree studies, to the benefit of universities and polytechnics.

RON GRAY
Assistant Chief Officer (Liaison)
Business and Technician Education Council
Central House
London WC1

Figure of speech

Sir - I was interested in Donald Nash's article (TES, September 9) to learn that he thought that figure work in arithmetic could be assessed equally as well as figure work in ballet.

I wondered whether he had confused the gymnastics with his Gislele. While I am, accustomed to the to be constructed in the existing primary schools, I have not attended a performance at Sadler's principal dance was greeted with a score of "I'll give her five" from the Gods. I wonder if Mr Nash is piecing a new construction upon the biblical prophecy "and all will be judged."

GORDON MOTT
Diagonal Education Officer
Times Education Authority
London SW10

DES muddles curriculum issue

Sir - Many people feel that the time for a national curriculum is long overdue. The trouble is that there are nearly as many ideas about what it should contain as there are commentators on the subject.

Unfortunately, the DES document does not provide any sort of thinking on the matter which could be described as seminal. Instead it appears confused and unrelated to other Government initiatives - for instance, the reintroduction of norm-referencing, the advocacy of combined courses for which GCSE accreditation has not even been recommended to date, the support of the principle of up to 30 per cent of science in a pupil's curriculum, the apparent withdrawal of parental choice.

Far more importantly, the document is fundamentally flawed. The Secretary of State is right to be concerned with the poor standards achieved by some pupils and by the poor showing of some parts of our educational system as compared with that of many other countries. It may be that the national curriculum is needed to overcome these difficulties; the trouble is that Mr Baker's national curriculum will not deliver the goods.

The introduction of a national curriculum will be a painful process. If it is to be effective, however, it must be preceded by a detailed consideration of such questions as "What is education for?" "What concepts, attitudes, values and skills do we want children to acquire?" "How can these be ac-

quired by children in a way which will excite, motivate and intellectually stimulate each one as well as lay the foundations for a productive and happy life in the 21st century?" In the "traditional" subject packages what is vital, what is useful, what is superfluous?

To achieve the laudable aims that the Government has in mind a complete reevaluation of the content of each subject is needed as well as a radical reappraisal of recent years, for example, GCSE, TVE, education, graded tests, modular courses, records of achievement. In the process we shall probably have to rewrite syllabuses and jettison much that has been sacrosanct for years, replacing it by new materials more closely related to the world in which pupils will find themselves. This process must take place if the introduction of a national curriculum is to be anything more than a paper exercise.

In seeking to replace the mediocre with the middling, Mr Baker has not heeded the words of the preacher in Ecclesiastes "Where there is no vision, the people perish". Sadly, the Government's myopia will lead to a further generation of children perishing in the new educational desert, and we all know who will get the blame for that.

S A NEWTON
Head
Monte Hill High School
South Croydon

Primary view

Sir - NAPE has submitted its analysis of Mr Baker's proposals in the prescribed time, but regrettably with no possible recourse to grassroots opinion. We are heartened, therefore, by the almost total unanimity emerging from all over the education spectrum in opposition to the Government's plans, since by and large we found little merit in them.

Also during the summer break, we were instrumental in securing an Early Day Motion of the House of Commons protesting at the short consultation period and its timing. This still stands (No. 136 in the name of Paddy Ashdown), and if enough MPs sign it before the end of the session, it has to be debated.

We additionally met Mr Baker and tried to discuss the curriculum-related recommendations of the House select committee, which reported in 1986. There are times we found ways to raise the subject and each time he refused, saying we should first read his then newly-published red booklet. This we have now done and still prefer the select committee's thinking as a better basis for sustaining and developing existing best practice, which is most vulnerable to the Government's ideas.

These will encourage only the routine, the unimaginative, the subservient and the time-serving spirits that inspire all of us in the absence of vision and opportunity.

He assured us the chance remained

to submit views to the various working parties and we believe that testing and assessment should engage high public attention. We oppose the practice as Mr Baker envisages it for as with so much else in the overall package it will interrupt and possibly destroy some of the most promising movements in opinion and practice to have illuminated post-war educational thinking. Equally, it will be crucial for primary thought to find expression in the work of the subject groups. The heavy secondary perspective enshrining the curriculum document especially, but permeating the others as well, both reflects ignorance of the distinctive nature of primary children and their learning as well as threatening to inhibit best practice.

NAPE's National Council, representing an organization committed to partnership, is much comforted that its instincts and judgements seem so widely endorsed among lay and professional groups alike. Rarely in our experience has such common cause been engendered and we can but hope that all will remain vigilant, and determined to protect excellence wherever it is found. In school, home, college or local authority.

JOAN LISTER
Chairman
MERVYN BENFORD
Hon Secretary
National Association for Primary Education
4 Chequers Place
Headington Quarry Oxford

Work out

Sir - School option choices in fourth and fifth forms, by their very nature imply that the majority of pupils may not be taking the option subjects. The consultation document *National Curriculum 5-16*, fails to seize the chance of moving towards a more broad-based curriculum but has perpetuated a system that is both irrelevant and unfair to many pupils.

Nowhere in the document is the subject economics or the theme of "economic awareness" mentioned despite the great amount of work done by bodies such as HM Inspectorate and School Curriculum Development Committee towards constructing curriculum guidelines in this area.

The implications for our future as an educated industrial nation with a well-trained management are frightening: the majority of our pupils will leave school with no formal education in economics and no preparation for the world of work.

Employers who have had time to read the national curriculum document must be horrified at the lack of any mention of the importance of careers guidance and work experience, also the lack of any systematic way of tying up the cross-curricular themes.

DAVID GUTMAN
Teacher Co-ordinator
Business Education Centre
Teachers' Centre
451 High Road
London N5

Missing message

Sir - I would be grateful if you would print the sentence you omitted in my article "Two ways to hit a target" (TES, October 2), since without it the proposed mechanism for integrating teaching assessment and test-item drawn from a national item bank is not made clear.

The missing sentence was "To avoid domination by the national test results, the selection and timing of the tests would need to be in the hands of the teachers in a single school, group of schools or local education authority." Teachers would then be able to report the separate results on each nationally validated assessment as a small part of each student's detailed record.

MARGARET BROWN
King's College
552 King's Road
London SW10



Wider role for parents

Exclusion zone

Sir - The last few weeks has found your columns groaning under cumulative weightings of those whose teaching subject has been left out of Kenneth Baker's curriculum shopping list. However, for some time it has been obvious to many of us that the natural expression of the current populist approach to the curriculum would follow the same simple recipe as the recent orchestrated criticisms of the teaching profession, namely few moving towards a more broad-based curriculum but has perpetuated a system that is both irrelevant and unfair to many pupils.

However, this cold war of designer dogma matched by righteous indignation does provide the opportunity for a compact between all concerned with the education of our young people, namely that of identifying the proper

extent of schooling and those responsible for it and the wider opportunities for education involving parents, media, business and the Church, and those responsible for that.

You never know, there might be some who are prepared to offer advice to parents on their negotiating rights, their responsibilities and their conditions of service, and delineation rather than denigration may become the order of the day.

A truly holistic approach to the curriculum is now called for and should provide the first task for the new curriculum council. In brief, it is not what we wish to put in the national curriculum that is important - it is rather what dare we leave out.

K WRUDDIMAN
Principal
Wakefield District College
Margaret Street
Wakefield
West Yorkshire

YOUR TEACHING APPRAISAL

By Graeme Kerr
Examines nature and purpose of appraisal; gives a teacher's self-appraisal questionnaire.

YOUR CV IN TEACHING

By J. D. Roberts
Detailed analysis of 4 CV's and their supporting letters.

YOUR APPLICATION FOR A TEACHING POST

By J. D. Roberts
Considers letters, forms, testimonials, references, with helpful notes.

YOUR INTERVIEW IN TEACHING

By J. D. Roberts
... useful ... offering comprehensive guidance to candidates for teaching posts." (Times Educational Supplement).

YOUR INTERVIEW QUESTIONS

By Oliver Hamilton
Suggests responses to "... a series of questions any applicant for a teaching post is likely to receive." (Education).

YOUR PROMOTION IN TEACHING

By Brian Threlfall
Looks carefully at factors likely to affect a teacher's promotion prospects.

YOUR EARLY YEARS IN TEACHING

By J. D. Roberts
A check-list concludes this consideration of issues likely to arise early in a teaching career.

YOUR DISCIPLINE IN SCHOOL

By Richard Farley
... practical and optimistic." (AMMA Briefing).

YOUR MULTICULTURAL SCHOOL

By David Houlton
Raises vital current issues, makes positive, practical suggestions.

YOUR HOME SCHOOL LINKS

By John Seaton
Indicates how relationships between home and school might be improved.

All 32 pages
£1.60 each, UK/BPO post paid, from
NEW EDUCATION PRESS LTD
13 Church Drive, Reykjavik
NORW. NG12 5EG

Courses

Edward de Bono's

THE CoRT THINKING PROGRAMME

Awareness Sessions

Following its recent publication of the new, revised, second edition of *The CoRT Thinking Programme*, Pergamon Press has organised three, day-long, "Awareness Sessions" (in Oxford, Manchester and Cambridge) which will provide those who attend with the opportunity to acquire a closer knowledge of the objectives and structure of the course whilst experiencing its methods first-hand. These sessions will be led by Frances Linkov, Curriculum Development Associates Inc.

Sessions to be held at:

Oxford - Wednesday, October 28th
Manchester - Friday, October 30th
Cambridge - Wednesday, November 4th.

Cost of attendance will be £25.00 per person.

If you would like further information, please contact Patricia Hawkins at Pergamon Press.

PERGAMON PRESS

Headington Hill Hall Oxford OX3 0BW England
Tel. Oxford (0865) 64881

Y.M.C.A.
Outdoor Education
High Plains Lodge
Outdoor Centre,
Aston, Cumbria
5 day mid week school
courses
£78 + VAT per head
includes return rail travel,
all centre costs and full programme with qualified staff.

RING Chris Jones on
091 3852622/3853085
for brochure and availability.

TO PLACE YOUR COURSES ADVERTISING PLEASE CONTACT
John Ladbroke
on
01-255 3000

Wolsey Hall Oxford

GCSE/GCE
New GCSE distance learning courses cover all exam requirements; put you in phone and postal contact with the same tutor throughout.
GCE 'O' & 'A' level also available.
Free prospectus from: The Registrar, Dept. BB7, Wolsey Hall, Oxford OX2 6PR
Tel: (0865) 52200 (24 hrs)

CONCERT TOURS

In Vienna, Salzburg, Paris in Amsterdam for Chorus, Orchestra, Folk or Jazz. Complete brochure on public relations. Young Musicians, the only of its kind in the world. For details call (01) 588 2222. Send for your free brochure today.

LETTERS

FEATURES

Black parents have more to fear

Sir - We are deeply shocked and concerned to read the Platform article by David Blunkett (TES, September 25) advocating sympathetic consideration for white parents who refused to send their 26 children to Headfield Church of England School on the grounds that most of its pupils are of Asian origin.

It is sheer naivety on Mr Blunkett's part to wonder whether white English can identify their own culture, and plain hubris to equate the fears of black parents regarding their children's education with that of white parents. What black parents fear, whether their children go to a predominantly white school (in most cases) or predominantly black school,

are the evil effects of racism entrenched in the English school system which results in black children's underachievement. Two public reports - by the Rampton and Swann committees - established the facts.

David Blunkett, being an ex-leader of Sheffield City Council, ought to know better how the school system works and that every layer of the power structure in education (the DES, I.C.A.S., H.M.I.s, directors of education, advisers and teachers) is dominated by whites of English culture, and consequently, there is no reason for white parents' fear on cultural grounds even though a school's pupil population is predominantly black.

Of course, any legitimate concern of parents, white or black, on educational grounds, such as confusing curriculum, ineffective teaching, poor discipline and examination results deserves support and sympathetic consideration from all quarters, but any parental concern on sinister grounds of race (because of predominantly black pupils) should be strongly condemned and opposed at all costs by right-minded people.

RAJRAY
Co-ordinating secretary
National Convention of Black Teachers
PO Box 30
Pinner, Middx



Is culture being racially defined?

Faith to face

Sir - In his article "Facing up to the new realities" David Blunkett has made some serious errors and charges when discussing the implications of the Dewsbury case.

Kenneth Baker recently mentioned "all-white schools, all-black schools and Muslim schools" all in the same breath and Mr Blunkett likewise fails to differentiate between Asian and Muslim. The latter is not a description of an ethnic minority while the former includes Hindus, Sikhs and Christians, all of whom have cultures in some ways vastly different to that of Muslims, whether Asian or not. Hence, he is talking about race, not culture, so his "fundamental" opposition to Muslim schools must be based on either ignorance or prejudice or both.

He fails to explain how the constituent parts of the multicultural society he favours are to be preserved if we are to halt the slide into a monolithic mish-mash of cultures which we are already, unfortunately, seeing. With

his derisory comments on the "so-called parental choice" being proposed by the Tories, he tries to score political points but his alternative is to prohibit any choice at all. If we, for example, were demanding that all schools must be of a denominational nature, I'm sure he and his colleagues on the Left would be outraged at such a denial of human rights and freedom. Why then are they trying to impose the opposite, that all schools must be non-denominational?

He blandly states that Muslim "fundamentalists" do not care about the quality of their children's education so long as it is based on culture and religion (which can be two different things). This demonstrates that he has probably never spoken to those Muslims trying to start schools to discover just why they are doing it.

We are not fanatics, just parents who do care, very much so, about education and who believe, like Mr Blunkett, that "... you need to understand other people's (history and culture) but ... have to have something of your own to start with". This

encapsulates what we are aiming for with Muslim schools. Naturally, until the initial demand for places in Muslim schools has been satisfied (and we must remember that, like Christians, not all Muslim parents wish to send their children to a denominational school), the schools will probably be exclusively Muslims on the roll.

However, as has happened with Church schools, non-Muslims can enrol their children if they so desire; this has, in fact already occurred at our school, the Islamia Primary in Brent, where we have half-a-dozen Christian children on the waiting list.

If we fail to exercise such parental choice, as he would wish, then our fear is that the schools in the UK will begin to produce totally confused young adults who are unaware of exactly who they are or where they belong.

IBRAHIM B HEWITT
General secretary
Islamic Circle Organization
3 Furlong Road
London N7

Worrying ideas

Sir - I have read and re-read David Blunkett's article and certain ideas within it continue to worry me.

He wonders whether "we" can identify anything as specifically English and later in the same paragraph refers to "white parents in predominantly black and Asian neighbourhoods" having to ask questions which "start very much at home". He refers to black and Asian children in predominantly white schools as having not just interests and religion but also a culture which should be "respected and developed".

Isn't the main thrust of all this to suggest that "we" (presumably the "white, British half-Christian majority") need to define "our" Englishness and that this is somehow separate from the culture of blacks and Asians? And doesn't this mean that culture is being racially defined? And isn't this racism?

JOHN QUICKIE
Division of Education
University of Sheffield

Not so different

Sir - So Mr Kenneth Baker, the Secretary of State for Education and Science, is, after one brief visit, very impressed by the American high school system from which he believes we can learn a lot.

I wonder if anyone has explained to him that the American high school operates a system as near as uncensored to the true comprehensive: there is virtually no selection, most parents have no choice but to send their children to the local junior and senior high school, and I have never met anyone, however wealthy, who sent their children to be privately educated.

My own experience of teaching in the United States leads me to believe that there is little to choose between the English secondary school and the American high school, as both provide education that is out of touch with the real needs of most students. I remember once helping an American friend's teenage daughter with her homework which consisted of rote learning the names of the kings and queens of England.

Primary or elementary education is another matter, and my own impression is that the American elementary school has a great deal to learn from its English counterpart rather than the other way around.

ANTHONY KINSEY
The Old Dairy
Willingale
Essex

As time goes by

Sir - It must have been April Fool's Day when the Historical Association's watchdog committee put forward its proposals for the core curriculum in history 5 to 14 years, or alternatively they were providing free material for the music hall.

Although entitled proposals for the 5 to 14 years range, I could find only references for 7 to 14 years. Perhaps the committee was unable to decide what younger children can manage in terms of learning the facts. Indeed, the curriculum proposals appear to be little more than a chronological list of facts to be inculcated to children about periods of civilization, the intruders of power struggles, and areas of the world which are beyond the scope of children's understanding.

Primary schools' understanding and experience with children is that they learn best from experience and from the living world round about them, from artefacts they can see and handle, from relevant, meaningful and practical investigations which have purpose and which gradually allow them to acquire historical concepts - in particular that difficult area for children - the very understanding of time itself.

Children are not targets to be bombarded with facts and tests and benchmarks. Children are individuals and have rights. History for them must be living, active, dynamic and real and be within their understanding of the world. The well-known Chinese proverb, "I hear and I forget, I see and I remember, I do and I understand," has a wealth of meaning and truth. In any case, history for children does not come in packets but embraces all areas of the curriculum and weaves a pattern in much of learning which is not specifically historical.

Having recovered from the initial horror of the proposals, I then turned to the composition of the Historical Association's watchdog committee. Out of 26 members, not one is a current practising primary teacher. In composition includes seven university dons/professors, eight secondary teachers, a publisher, an FE teacher, four teacher trainers, three honorary officers (including a professor), an exam board representative and one trainer of primary teachers.

These are indeed sad times for British primary education, until recently recovered throughout the world. Perhaps our historians, including Kenneth Baker, would remember the Hadwin Report (1931): "The curriculum is to be thought of in terms of activity and experience rather than of knowledge to be acquired and facts to be stored." Since those words were written, children as learners have not changed, neither has the age at which they begin to develop powers to think in abstract terms.

If we do need to have a core curriculum, then surely Kenneth Baker should be consulting with people who are involved with children's learning on a day to day basis, not with people who are locked up in ivory towers dealing predominantly with subject matter. If the Historical Association's proposals are allowed to hold sway not only will children's interest in history be blocked, but the slow haemorrhage of teachers from the profession will accelerate into an unstoppable torrent and I will be among them.

PETER R SUDWORTH
Head
Bushfield County Middle School
Moon Street
Wolverton
Milton Keynes

The head was in his counting house...

Solihull's local financial management scheme costs more but it is popular in schools that have tried it, Paul Harrison reports

Solihull refers to its version of local financial management as financial autonomy or just plain autonomy. The scheme started in 1981 with just three schools and has been gradually increased to 10 - the sixth-form college, six comprehensives and three primaries. From next April all but one of the 14 secondary schools will be autonomous; the last will join the list by the following year with at least three more primaries.

Elizabeth Sands, Solihull's autonomy officer, says although it was originally initiated as a cost saving scheme, the emphasis rapidly changed to how best to use scarce resources. Indeed, it costs money to run because, although budgeting is delegated to schools, accounting is centralized. Many costs are hidden, such as modifying the authority's computerized central accounting system for "autonomy" accounting. Solihull has also just provided every autonomous secondary school with a microcomputer which will eventually connect to the main-frame computer. And the educational accountant has had to employ two extra assistants.

However, Michael Sweet, the director of education says there has been no "phenomenal growth" in central costs. He thinks that a cheque book system, like Hertfordshire's, where schools have their own bank accounts would be administratively more cost effective: "We have considered it, but the director of finance has been unable to persuade the banks to allow all the separate school accounts to be regarded as one big account for interest and charge purposes."

Schools in the scheme are apportioned 91 per cent their annual allowance under different budget headings such as building maintenance, grounds maintenance, canteen and furniture, teaching staff, clerical staff, electricity, postage. The remaining 9 per cent is retained for control over items which "pertain to the authority's role if it were landlord" - structural repairs and plant maintenance, for instance.

Contrary to the Government's apparent wish for fairly simple (possibly weighted) formula for budget allocation, Solihull uses a different formula.

Decisions are made by people in the best position to judge

In for each budgetary item: building maintenance is based on capital value of the school; fuel on historical consumption and current unit cost; grounds maintenance on acreage; and staffing on pupil numbers - weighted in the social priority areas in the north of the borough.

Principle exclusions from schools' allowances are early retirement pensions, debt charges, insurance, transport, school meals and peripatetic music and special needs teachers.

Headteachers have freedom to spend money largely as they wish and can carry forward any under or over-spends from one financial year to the next. Interest will be credited or charged from cost year.

So what's in it for schools? Jane Hewlett, head of Alderbrook comprehensive school which has been in the scheme since 1985, says: "Better decisions about the school are made by the people in it. They are in the best position to judge." She cites an example which will have a familiar ring for most heads - internal decoration: "Previously this was done on an ad hoc basis. Just before the end of the financial year someone would come round and say 'We've just got enough money to do you four rooms - which ones do you want doing?' Autonomy allows her school to draw up its own comprehensive priority-ranked schedule of decoration which will mean every area will be decorated within six years.

She says it is also getting better value for money. "We are able to order from the people who give us the best service. For example, our grounds are now maintained more frequently to a higher standard and at a lower cost than the I.C.A. service provided us with."

Gordon Kirkpatrick is head of Dorridge Junior School. His cumulative savings from various budget areas over the last two years has allowed him to buy a half-time teacher for one year on top of his normal establishment. He has also been able to spend over £3,000 on science equipment and £3,000 on maths equipment - on top of his £6,000 allocation for capital. And he has had the school completely insulated, which should bring future fuel savings.

Gerry Thomas, head of Sharnham Cross Junior School, says: "If you try to run the scheme as it was intended - to look at the best way to use a limited amount of money for the education of your children - it takes a lot of time. That falls mainly on myself, but I do employ extra clerical help one day a week, paid for out of my budget, purely to run the scheme. And he admits: 'the time I now spend in contacting plumbers or carpenters means that I am probably not as involved with the children as I was.'"

Gordon Kirkpatrick, although admitting spending more of his own time out of school on administrative matters than before, says once the total budget of £1,200,000 goes on staff salaries. Savings are made at the margins, particularly in the area of grounds maintenance.



But there are prices to pay. Although schools have substantial help and advice from the autonomy officer - whose salary the participating schools must pay - Jane Hewlett says: "In the last three years we have taken on board a whole different management exercise. That has taken an enormous amount of extra time that I don't think the I.C.A. fully recognizes."

At Alderbrook, for just an extra scale point - paid for by the school - a senior teacher operates the £1 million budget, mainly in his spare time. The school secretary receives an honorarium of £150 for her extra workload and the school pays for an extra 20 hours clerical assistance.

At Sharnham Cross Junior, Gerry Thomas says: "If you try to run the scheme as it was intended - to look at the best way to use a limited amount of money for the education of your children - it takes a lot of time. That falls mainly on myself, but I do employ extra clerical help one day a week, paid for out of my budget, purely to run the scheme. And he admits: 'the time I now spend in contacting plumbers or carpenters means that I am probably not as involved with the children as I was.'"

Gordon Kirkpatrick, although admitting spending more of his own time out of school on administrative matters than before, says once the total budget of £1,200,000 goes on staff salaries. Savings are made at the margins, particularly in the area of grounds maintenance.

But there are prices to pay. Although schools have substantial help and advice from the autonomy officer - whose salary the participating schools must pay - Jane Hewlett says: "In the last three years we have taken on board a whole different management exercise. That has taken an enormous amount of extra time that I don't think the I.C.A. fully recognizes."

At Alderbrook, for just an extra scale point - paid for by the school - a senior teacher operates the £1 million budget, mainly in his spare time. The school secretary receives an honorarium of £150 for her extra workload and the school pays for an extra 20 hours clerical assistance.

At Sharnham Cross Junior, Gerry Thomas says: "If you try to run the scheme as it was intended - to look at the best way to use a limited amount of money for the education of your children - it takes a lot of time. That falls mainly on myself, but I do employ extra clerical help one day a week, paid for out of my budget, purely to run the scheme. And he admits: 'the time I now spend in contacting plumbers or carpenters means that I am probably not as involved with the children as I was.'"

Gordon Kirkpatrick is head of Dorridge Junior School. His cumulative savings from various budget areas over the last two years has allowed him to buy a half-time teacher for one year on top of his normal establishment. He has also been able to spend over £3,000 on science equipment and £3,000 on maths equipment - on top of his £6,000 allocation for capital. And he has had the school completely insulated, which should bring future fuel savings.

Gerry Thomas, head of Sharnham Cross Junior School, says: "If you try to run the scheme as it was intended - to look at the best way to use a limited amount of money for the education of your children - it takes a lot of time. That falls mainly on myself, but I do employ extra clerical help one day a week, paid for out of my budget, purely to run the scheme. And he admits: 'the time I now spend in contacting plumbers or carpenters means that I am probably not as involved with the children as I was.'"

Gordon Kirkpatrick, although admitting spending more of his own time out of school on administrative matters than before, says once the total budget of £1,200,000 goes on staff salaries. Savings are made at the margins, particularly in the area of grounds maintenance.

calculator, common sense, enthusiasm and guidance."

It is possible for a school to incur huge unexpected expenses, such as re-rating or the provision of supply teachers for long-term absences. Indeed, for a whole year, Gerry Thomas had to pay the salary of an absent teacher and the covering supply teacher, which wiped out his contingency fund altogether.

But as from next year, the I.C.A. will pick up the tab for supply cover after a cumulative absence of any one teacher of 21 days. It has also taken on the responsibility for rates payments.

Headteachers' associations have expressed the fear that any shortfall in educational provision can now all too easily be blamed on a head's financial management, rather than being put at the I.C.A.'s door. Jane Hewlett argues that cannot arise if budgeting decisions are shared, as they are at Alderbrook, through faculty meetings and staff and governor autonomy committees.

Another fear is that if an I.C.A. sees that schools are making savings each year they will be tempted to reduce funding - last year the ten schools "underspent" by £300,000. But Mr Warner, finance officer for Arden, points out that they should not really be regarded as savings. He says: "It's shifting money around. It's not that we don't know what to do with it, it's just that we've got so many things to do it all takes time." He says carrying over funds removes the need for a frantic spend up at the end of each financial year.

Elizabeth Sands says: "The authority has gone on record as saying that these 'savings' will never be looked at as an indication that education is over-funded; as a reason for cutting the education provision." However, when North Sea oil runs out, in times of future stringency, that could prove to be mere rhetoric.

The authority's commitment to autonomy and its duty to be prudent with ratepayers' money generates certain anomalies. For example, Solihull has entered into a contract with a bookseller which offers substantial discounts - on condition that all schools in the borough purchase their books from it; thereby negating their autonomy.

Without a doubt it is improving the quality of education

Similarly, schools must purchase their consumable educational materials through Warwickshire Control supplies.

So is the game worth the candle? Local representatives of both the National Association of Head Teachers and the Secondary Head Teachers Association have not had any major adverse criticisms.

Gordon Kirkpatrick sums up the general feeling: "You can plan ahead; there is a flexibility to it that generates the feeling that if you want to change something you can; and that makes you want to look at areas of the curriculum. Without a doubt, it is improving the quality of education for the children in my school."

Equally, all had grave reservations about the blanket application of autonomous schemes. Jane Hewlett says: "It has been successful in my school because I have a competent member of staff running it, extremely efficient secretarial help, and tremendously supportive parents and governors. I wonder what it would be like if I were head of a school without so much support." She also thinks the enthusiasm of heads for autonomy depends on the state of their school buildings at the time; Solihull makes no allowance for this whatsoever.

Solihull feels autonomy is still in its infancy. Michael Sweet says: "We asked heads who we thought could do it to undertake the pilot. So it has not been representative of all abilities. For that reason we were nine-tenths of the way to success before we started. If you oblige people to do it, I'm not sure that the success rate would be the same." Indeed, the only school where autonomy did not work and where it was eventually dropped was a school with antagonistic governors.

And because spending flexibility decreases with the size of the school, he believes there is a watershed below which autonomy would just not work. But what size that is, he does not know: "We just wonder where the Government plucked its figure of 200 pupils from."

Michael Sweet thinks the Government's timescale is unrealistic. "We intend to make our primary schools autonomous very gradually. In no way could we take on board the proper induction of our 31 primaries with 200 or more pupils within anything like the Government's timetable."

No terrorist

Sir - I was alarmed to see myself described on the front page of your paper as though I was some kind of parent "terrorist" (TES, September 25).

I thought I had made it clear to your reporter that I was speaking as an individual parent and I specifically denied that I was advocating "civil disobedience". If a label must be used, then "direct action" would be more appropriate.

At the CASE conference, I posed the question - what was the educational value of the proposed benchmark tests to my children? To date, information about the tests has been confused. An inadequate consultation on the proposals for testing has denied parents both the information and the opportunity to make their feelings known.

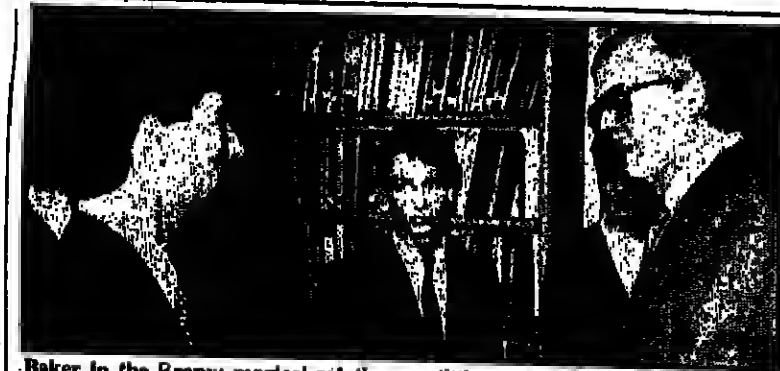
The purpose of the tests is at best obscure, and at worst suspicious. If the true object is, as I fear, to monitor teachers and compare schools, then I do not wish to take the risk of my children being the incidental victims of such a policy. Under such circumstances, I will withdraw my children from the test system.

Pass/fail testing has been thoroughly discredited as an educational aid, particularly at primary level. The Government appeared to acknowledge this with the introduction of the innovative GCSE examination and the principle of continuous assessment.

It is incredible that the same body is now contemplating such a retrograde step.

Both CASE is indeed opposed wholeheartedly to the introduction of benchmark testing at 7, 11, 14 and 16, and has made a formal submission to the Secretary of State for Education to that effect. Bath CASE will be active and vociferous in alerting parents to the divisiveness of pass/fail testing. However, CASE is an organization dedicated to the promotion of education, not an anarchist group. Civil disobedience is not an educated response, and what I advocate, and what I hope my children will learn at school, is the value of reasoned argument and the confidence to use it loudly and clearly.

BARBARA McLAUGHLIN
5 Hay Hill
Bath



Baker in the Bronx: magical solutions or little to choose?

Predictable results

Sir - Mr Baker's enthusiasm for what he has seen in the United States (TES, September 25) is understandable. He has seen "magnet" schools functioning with the kind of energy and enthusiasm which comes when you give capable teachers a group of pupils who are motivated and who have particular academic strengths.

I hope that his enthusiasm will be moderated by the realization that he is not seeing something that is new. The teaching profession already knows that given able, motivated pupils the results will be good. The grammar schools showed us that many years ago.

The problem that arose with the grammar schools was "the rest". Magnet schools face exactly the same problem. Having recently returned

from a visit to the United States and talked to the principals of magnet schools, they accepted that their gain was only at the expense of other schools. One principal said that she had had parents queuing for three days and nights in order to obtain a place for their child in the school.

It is too easy to look around and find magical solutions to the problems faced by teachers. Simple answers do not exist. Education has been hindered above all by too many political decisions and by inadequate funding. I hope the Secretary of State for Education can be persuaded to give teachers his support, both verbal and financial.

SUSAN LINDLEY
Chairman, Dudley Federation
Professional Association of Teachers
31 Chamberlain Road
Kings Heath
Birmingham

Ground the pilot

Sir - Not all NUT associations in Cumbria share Mr Terry Buckler's view ("Bld to ground appraisal pilot fails", TES, September 11) regarding participation in the teacher appraisal pilot.

The officers of this association have consistently recommended non-participation, for reasons including those outlined by Ms Marion Dadds in the same issue.

R WHITE
Press relations officer
Barrow in Furness Association
National Union of Teachers
133 Oxford Street
Barrow in Furness
Cumbria

Supply lines

Sir - It was unfortunate that Sarah Birkin chose to begin her response (Letters, September 18) to Elizabeth Bradbury's Talkback article (August 28) on absentee teachers, by criticizing supply teachers.

Secondary school supply teaching, by its nature, rarely offers continuity to pupil or teacher and the quality of the teaching supplied depends on the adequacy of the preparation by school and department.

All schools should have basic facts about their particular system briefly summarized on a sheet of survival notes, including the times of bells since pupils are usually unreliable witnesses on this point. All schools should provide a clear map of the site. All

departments using a supply teacher should have instructions for each lesson Sellotaped to the appropriate teacher's desk and including the name and whereabouts of a senior member of staff to whom application can be made when a problem, whether academic or disciplinary, arises.

If adequate preparation has been made for a known absence, the resulting lesson can often be interesting and stimulating for the supply teacher and for the pupils, who usually respond positively to someone who is interested in what they are doing and is often genuinely seeking answers when asking questions, rather than merely testing understanding. The exchanges that result may not be exactly how the subject teacher would have tackled the topic but are certainly educative.

Sarah Birkin's glib about supply teachers and their half-read novels

seems rather harsh. I can think of few more intelligent responses to sitting for an hour supervising a well-organized class while they write a timed essay than to read a novel. A display of unnecessary activity will contribute nothing to pupils' education.

Finally, it seems to me that supply teachers have a unique insight into the running of individual schools and the ways in which particular teachers operate. Perhaps, if Sarah Birkin's view of them as idle doers is widespread, the duty of external assessors, gauging teacher and school performance, should be added to their responsibilities.

ELSPETH BAIN
8 Langholm Green
Maddely
Telford
Shropshire

Cashing in on childhood

Hilary Wilce reports on the growth of private pre-schooling

Toddlers in the prosperous north London suburb of Barnet have a busy life. Cecile Brigham, mother of Ruth, rising two, ticks it off on the fingers of her hand. "Mondays it's swimming. Tuesdays it's music. Wednesday it's creative movement... There are mothers here who have a whole programme for their kids. Something for every day of the week."

In an area where pressure on state nursery places is acute, these children will almost certainly move on to a community playgroup or private nursery, eventually arriving at their first school with years of learning under their belt.

The education of Britain's pre-schoolers has always been mainly in private hands, with less than a quarter of all three and four-year-olds with maintained nursery places, and more than half in playgroups.

But in the competitive 1980s many parents are looking for something more than a little light finger-painting for their under-fives. Specialist classes are multiplying, there is steady growth in the sales of educational books and toys, and the pre-preparatory end of the independent schools sector is booming.

Last year the number of two to seven-year-olds in private schools went by more than 4,000 - 6.4 per cent - and many more were turned away. In Lancashire, Bolton School Girls' Division has just opened a new nursery wing and more than doubled its intake of four-year-olds. Fifty got places this autumn, a further 100 failed to get in.

"If I had the money I'd open my own private nursery tomorrow," says the head, Mrs Margaret Spurr, who attributes the growth of her nursery to a rise in the number of working mothers who prefer to see their children in a kindergarten rather than at home with a nanny. "And people are more concerned about schooling. After all we've never had such an intense interest in this subject. There's something about it in the press every day," said Mrs Spurr.

Only a minority of parents can spare the Bolton School fees of £1,392 a year, but many more are paying in ways they hope will give their children a headstart.

The Early Learning Centre, whose shops sell toys and books vetted for their educational value, report a steady growth in sales, despite eschewing toy bestsellers such as spin-offs from the popular but violent television series *Thundercats* and *Masters of the Universe*.

Supermarkets have taken up selling children's literature and Sainsbury's report success with their own-label books - a mixture of picture, story and early learning titles - although the past two years has taught them the value of strident, eye-catching covers. "We found the soft focus books lacked saleability," a spokeswoman said.

Piccolo, the children's imprint of Pan, has clearly identified the pre-school age range as a growth point in the educational market. Their



plans to launch early learning books for the over-fours were extended when research showed up a significant demand among parents of much younger children.

Commissioning editor, Mrs Catherine Bruzzone, points out that other publishing houses try to tap this market by putting a 3-plus age label on their workbooks.

"We decided it was quite wrong to expect pre-school children to do workbook activities

such as holding a pencil, or ticking a box," she said. "Our books are clearly rooted in a pre-school philosophy. They are full-colour, they are fun, and they read as stories in their own right."

Twenty-four titles will be issued for two to six-year-olds by next year. The books have attack, counting, games and discussion points, and are clearly packaged as learning materials.

"Why do parents want them? I think to some extent it's part of the general 1980s philosophy,

and I also think the teachers' strike has had an effect on the general climate and attitudes.

"Our research shows that the people buying these are the 'striving classes', if you like. Graduate parents aren't that bothered - until something goes wrong - but parents who've had more of a struggle are determined their children shall have every chance," said Mrs Bruzzone.

Pre-schoolers now have every opportunity, particularly in the prosperous city and suburban parts of the country. Dance and music classes are popular. In north London, Mrs Sue Harris, who has been teaching music for twelve years to children aged two upwards says interest has "mushroomed".

She now teaches 130 pre-schoolers every week, in highly-disciplined classes where the children learn rhythm and pitch, try out instruments and develop a wide song repertoire.

But with no control over standards, bad private classes coexist with the excellent, and local grapevines seethe with stories of lessons where the children run wild, or are bored silly.

Does it matter if toddlers are given less than expert introductions to formal education? Mrs Mary Grimsley, senior lecturer in early education at Westhill College, Birmingham, points out that anything that produces stress and anxiety about learning is likely to be counterproductive. She also notes warning signs from the United States where research has found evidence of "burn-out" among hard-pushed five-year-olds.

But she suspects a far more worrying trend here is the numerous different out-of-home experiences (child-minder, playgroup, crèche) a child now experiences before he or she even gets to

'Parents who've had more of a struggle are determined their children shall have every chance'

school. Everyone concerned with early childhood agrees that continuity is the ideal, but evidence shows that liaison even between established pre-school groups and schools is patchy.

Research done in 1983 by the Pre-School Playgroups Association for the Department of Education and Science showed that practice varied hugely from place to place, and from group to group. "Sometimes it can be very poor: Schools particularly tend to feel groups are encroaching on their patch," Mrs Grimsley says. "It happens with things like cooking, for example, which teachers produce as a special treat but which the children have already done."

Without liaison, important opportunities to ease children's entry into school are lost, and with the growing level of pre-school learning, could lead to infants who are more confused than encouraged. With it, the many benefits of pre-schooling are self-evident.

classroom. This year, companies will be able to enter themselves and their linked schools to take part in the scheme.

The RSA is also keen to attract even more participation from primary schools. At the moment, although it is too soon accurately to measure the effects of Industry Year, one of the most visible outcomes is the number of secondary pupils, particularly girls, who are looking at industrial management as a career option.

Assessment of the submissions for awards is by panels of two or three local professionals who will come from industrial and educational backgrounds, and the certificates they award go to the school and company for individual schemes. Where a school or college has more than one scheme in operation at a time, it is eligible for more than one award. Last year, one school got four certificates.

Linda Jackson has a ready store of ideas, guidance and contacts for schools who are interested in beginning their first collaborative scheme with industry. "It's not a competition," she says, explaining that every school which qualifies for an award will get one. "The idea is to encourage people with a bit of the back for good work, and a little kick up the rear to keep them going."

Submissions for the RSA Recognition scheme for achievement in education/industry collaboration will be accepted until Easter 1988. For information packs for each level of education, and for names and addresses of Industry Matters regional contacts, write to Linda Jackson (Education Co-ordinator) RSA, 8, John Adam Street, London WC2N 6EZ, telephone 01-930 5115.

Pay rolls

The commercial organization behind the infant gym game

"It used to be that toddlers were able to develop their physical attributes and motor skills and satisfy their natural desire for adventure from the environment in which they developed. This is not true in today's society..."

According to this promotional literature from the Tumble Tots commercial gymnastics programme, children will only be able to make the most of their opportunities "when they reach playgroup age" if they have learned to climb and jump, and hang and swing, bounce and tumble, and scramble and slide.

And since playgroup equipment is "too large and dangerous" for under-fives, "even if they could safely get to it", the "play programmed with a purpose" provided by Tumble Tots fills a vital gap, "producing 'better' children... better adjusted physically and socially to cope with the society into which they must take their place."

If ever a market ploy was destined to succeed, playing on the anxiety of parents to do right by their offspring must surely be it, and Tumble Tots is growing steadily.

There are 25,000 one to six-year-olds now taking part in sessions at more than 300 centres in this country, while the international arm of the company has a foothold in Singapore, projects pending in Malaysia and Brunei, and a long-term eye on Canada and Europe.

But on a recent rainy morning in a north London parish hall, horizons were more limited as mothers hurried to get buggies parked and toddler raincoats stripped off before the session's opening song galloped to a close.

All Tumble Tot classes follow an identical format for each age group ("Gymbabe" and "Gymbabs" classes are also offered for babies and schoolchildren in some centres), on "specialty designed" equipment.

Staff, distinctive in yellow tee-shirts, organized small trains of toddlers to shunt off to different corners of the hall where the children followed each other over planks and ladders, hopped on stepping stones, and rolled over rollers.

The impression was of a set structure, running to a tight schedule, with a shimmering nerver of chaos. Sometimes the toddlers somersaulting onto a mat were told to tuck their heads in safely, sometimes the helper was distracted and forgot.

Tumble Tots detail what children might be expected to achieve at two, three and four (two-year-olds: "pushing or kicking a ball with the foot in a predetermined path", "forward roll around a single bar (assisted) using an overhand grip and without releasing the bar" etc) but this



Head over heels; 25,000 parents pay for pre-school PE



Leaders get a two-day training course

did run into problems, although none of the 80 licensees failed to renew their contracts. People could earn up to about £10,000 and the company expected to be able to issue a further 40 licenses before the country was saturated, he said.

Since 1983, Tumble Tots (UK) Ltd has been a wholly owned subsidiary of the Jack Chin group of companies, and is run from Cannons Sports Club, a silk City venue beloved by yuppies and a far cry from the community halls where most Tumbling Tots are to be found.

'Most of the children seem to be having a good time'

The sports group bought out the company which had been founded on a programme developed by Bill Cosgrave, a former British Olympic gymnast and now the company's technical director, and set up 40 showcase centres across the country.

Now it runs almost entirely on a licensee basis, with people interested in running classes putting down £2,100 for a package which includes use of

the name and programme plus some insurance and staff training. "The main qualification is love of children," says David Thomas, "but people do go through a screening process."

There is also training for class leaders - two-day residential courses at the National Watersports Centre in Nottingham, under the eye of Bill Cosgrave and training director, Nik Stuart, formerly technical development director of the British Amateur Gymnastics Association.

"We expect someone to have been working as a helper for three to six months before being sent on a leadership course by the licensee," said David Thomas, "but obviously this isn't possible when setting up a new centre."

However, he stressed that Tumble Tots has an excellent safety record, runs spot checks on classes, organizes regional training days and receives "hardly any" complaints from customers.

While it seems clear that the classes do little harm, just what the toddlers get out of them is open to question.

Hilary Wilce

Mad enough to teach

Tony Patey explains why he is giving up a well paid job in Fleet Street for one in the classroom

where I had moved my family from the dormitory town of Brentwood, Essex.

It was quite an experience, apart from being a "golden oldie" among the youngsters. I found myself hurrying off to the 1pm London-bound train from a lecture that ended at 12.30pm (and I never missed it). Train journeys, purgatory to other commuters, became a joy as I read or prepared for essays and seminars.

It took six years, but, to the relief of my long-suffering but excellent tutors, I graduated this summer, despite journalistic distractions such as Guinness scandals and shock-horror City insider dealings which threatened my precious studies. By then I had been provisionally accepted for a postgraduate certificate in education at Cambridge.

One thing I haven't mentioned, and which is uppermost in the minds of many teachers, is money. I faced the question a few years ago. Fleet Street is very lucrative, so I decided to buy things I really wanted, such as an economical car and a really wanted library. And over the past two years my wife had had many of her domestic necessities renewed. We face the future with the worry of the mortgage and household bills, but no other outstanding debts. Maybe I'm too optimistic but there's got to be a point where money ceases to be

a hair-tearing experience. So, why did I go to all this trouble, why do I want to become a geography teacher? Escape committees and low morale in staffrooms were not discernible 10 years ago when I made up my mind. I felt I wanted to communicate in a more lasting manner than the ephemeral material I was producing allowed. If just one or two young people saw their way forward because of my efforts it would be worth any number of front-page stories that catch the eye for a day, but are hardly great moments in history. I also felt then, and even more strongly today, that a taste of some kind exists in every job, and if you've got to put up with irritation, it might as well be for worthwhile reasons.

That's why I found it difficult to give a straight answer when asked why I wanted to be a teacher at an interview at the Cambridge Department of Education. I could have waffled on about helping young people become better citizens; although true, it sounded far too pretentious. I could only flail my arms and say it was something I knew I wanted to do "deep down", which was also true but seemed hardly adequate. I wanted to use my previous experience to guide youngsters' careers, to forge links between schools and industry, to do so many things.



Realising a 'deep down' ambition

Despite all the leg-pulling, the long holidays haven't been a big consideration; I'm too busy wondering what I will have to cope with during term-time. But with all the new directives spinning from Mr Baker like sparks from a Catherine-wheel, teachers will need a breathlog space. Respect from the community? I'll pass on that for the moment. It's something a tabloid journalist doesn't really have the chance to care or even think about, anyway.

Industry Matters

Nick Baker looks at a scheme to encourage collaboration between school and work

Pupils designing working clothes or running a company newspaper, a class of eight-year-olds using their computer to analyse the local professional football team's attendance figures and another which ran a cafe: these are just some of the hundreds of schemes that won schools and companies special Industry Year awards.

Older pupils ran a bistro; a third-year secondary timetable took on a problem-solving course designed by British Gas; an hotel was taken over and run by 78 sixth-formers and there were enough Mini Enterprises to start a miniature stock exchange.

The Recognition Scheme for Achievement in Education/Industry collaboration is organized by the RSA. Entries ranged from the clean and tidy to the greasy and grimy ends of industry, from work with huge national concerns to links with small local businesses. One school even named its

four houses after local companies. Cheering and singing at inter-house matches will sound more like advertising than crowd noise.

It is hoped that starting from last year, a new generation of pupils in primary schools will have a completely fresh outlook on industry, a generation oblivious to the "anti-industrial culture" blamed for our industrial decline. For older pupils and students, Industry Year meant an opportunity to alter their preconceptions by direct experience of what industry is and does.

Although Industry Year is now over, its spirit lives on under the banner Industry Matters, with aims broadly similar to those of last year. Among these are ensuring that all secondary schools have links with industry, an increased involvement of industrialists with teacher training and a two-day traffic of seconded staffs between industries and schools.

The RSA recognition scheme for achievement in education and industry collaboration (which gave more than 1,500 awards to schools, colleges and companies last year, with an encouragingly high rate of success) will continue in a virtually unchanged form.

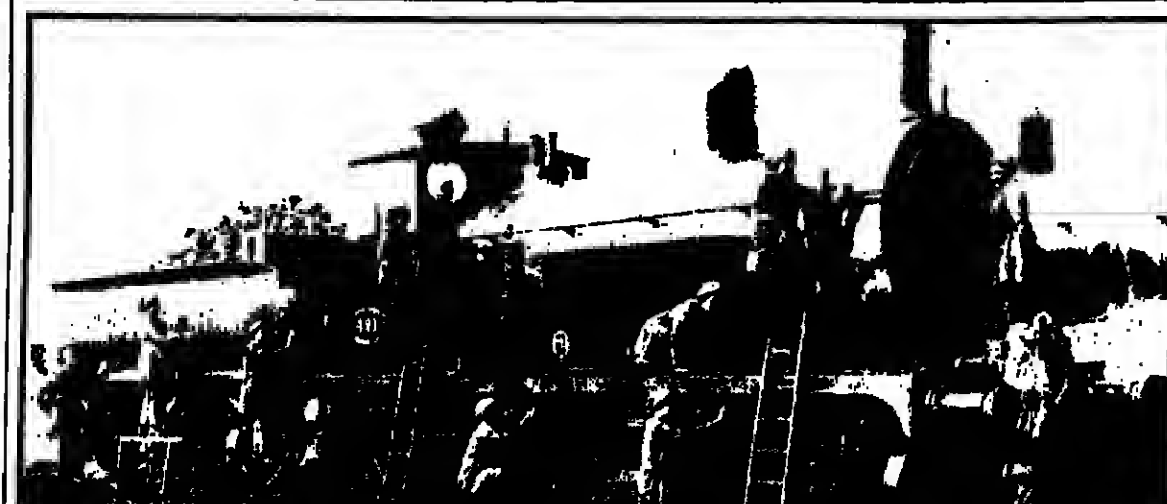
The education/industry activities have either to be newly initiated or clearly developed from existing ones. They also have to have firm roots in the curriculum and schools and companies have to show the intention that the activities will be sustained.

Linda Jackson, education co-ordinator for Industry Matters at the RSA, stresses that award-winning schemes can focus on teachers rather than pupils, with teachers seconded to industry, and companies seconding workers into schools - as long as the benefits are felt in the



Getting down to business at Sellafield

BOOKS IN CLASS



Women engine cleaners on the Lancashire and Yorkshire Railway during the First World War. An illustration from *The Railway Industry* by Betty Williams. Baisford Working Lives series £7.95.

Welcome trimmings

The World This Century: Working with Evidence. By Neil DeMarco. Bell & Hyman £5.95. 0 7135 2728 5
Questions of Evidence: The Twentieth Century World. By Peter Martin. Hutchinson Education £3.50. 09 180221 6

The use of evidence in history teaching has been fashionable, on and off, for 80 years or so: think of the documentary assortments produced for schools by M W Keatinge and others, well before 1914, and the various picture source-books popular between the wars. But today's emphasis on developing skills has so pushed "evidence" into the limelight that few textbooks can resist a little lecture on the nature and use of primary and secondary sources, coupled with an anthology of familiar gobble. If, moreover, you can slip "evidence" into your title, you guarantee good sales in the GCSE market.

The World This Century has these welcome trimmings, but it is basically a competent and attractive textbook. Neil DeMarco tells a good story vividly and concisely. He identifies and lacks key questions, highlights key episodes, dissects key personalities and judiciously assesses their roles. He has a sharp eye for revealing details, such as Hitler's concern that the shape of



Stalin's ear-lobe might reveal Jewish ancestry. Violence and melodrama loom rather large, reflecting both the nature of our century and DeMarco's teaching technique; Matteotti's murder is stressed as a turning-point in the evolution of Fascist Italy, Kennedy's as an exercise in the nature of evidence.

Evidence is indeed emphasized throughout. It supplies an extra dimension for the narrative as well as starting points for much worthy activity: evaluation, interpretation, deduction and re-creation. There are pictures, statistics, snippets from contemporary writers and later historians. Most are properly identified and dated, while quotations and exercises make sure they are properly used. The range is wide: memoirs, diaries, letters, polemics, together with subsequent commentary and biography; graphs, posters, photographs and,

especially, cartoons from many lands. *Krokodil* is here, and *Shapokchais*, though they are inevitably overshadowed by Patch's inimitable summary of the British establishment's world view.

Questions of Evidence prefers to put the horse before the cart and provide evidence without the distractions of preliminary narrative, evidence very welcome in the exam classroom. Earliest questions and exercises make sure the extracts are read and the pictures glanced at, encourage critical thinking and require a search for supplementary information. Peter Martin works in double-page spreads, three to six sources for each topic, ranging from the sixteenth century. Again, much of his "evidence" is the work of later historians, secondary sources, sometimes shrewdly used to point out pitfalls and weaknesses in the contemporary material. Some carelessness mars the presentation: occasional misprints or dubious transcriptions add confusion to some extracts; identification of others is vague or misleading; whilst poor reproduction and muddled questioning wreak havoc with the spread on Second World War posters. Evidence like this is a welcome classroom tool, but it helps if the presentation is meticulous.

Tom Corfe

Rich rags

Britain and Europe 1848-1980. By Martin Roberts. Longman £5.95. 0 582 22434 9.

The tendency for historical textbooks (especially those on modern history) to incorporate as much primary source material as possible is an extremely healthy one; and seems sure to have a salutary knock-on effect when some of the present generation of students become the next generation of historians.

The technique pays outstanding dividends in this ambitiously inclusive 16-plus history. For instance, in detailing the terrible German hyperinflation of 1923 (which, by making so many German voters overvalue financial stability at any political cost, so largely smoothed Hitler's road to power) Martin Roberts includes the raw statistics: "January 1921 - 64.9 marks to the dollar ... November 1923 - 4,200,000,000,000 marks to the dollar." This is dramatic enough, but is made more graphic still by a photo of two shabby street-vendors touting

boxes of old rags and boxes of modern banknotes. The rags are much more expensive. The effect of this is further enhanced by a quotation from a contemporary Berlin weekly:

As soon as I received a salary I rushed out to buy the daily necessities ... My salary ... was just enough to buy one loaf of bread and a small piece of cheese or some oatmeal ... An acquaintance of mine, a clergyman, came to Berlin from a suburb with his monthly salary to buy a pair of shoes for his baby; he could buy only a cup of coffee. This is the way to make history grip and it is followed throughout this very handsomely produced book. The accompanying commentary (usefully sectioned and captioned) is lucid and, considering the book's wide time-range, remarkably full. The sets of questions appended to each portion of the connecting narrative effectively probe the student's understanding and absorption of the text. The book is excellent value at its price.

Martin Fagg

Thrills and skills

Presenting Archaeology to Young People. Edited by Stephen Cracknell and Mike Corbushley. Council for British Archaeology £3.25. 0 906780 61 6

Many teachers make imaginative and effective use of archaeology to support their teaching about the past. Children are encouraged to share with Howard Carter, Mortimer Wheeler *et al* of some of the thrills and skills of discovery, deduction, empathy, imaginative recreation. Sutton Hoo was familiar in the classroom even before it earned Schools Council blessing.

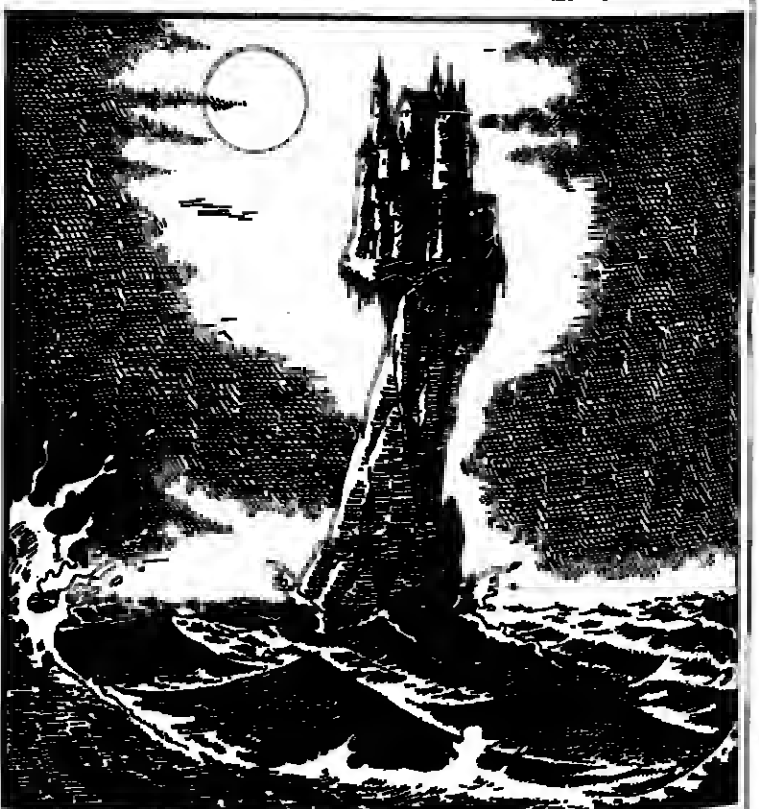
This assembly of short papers from a symposium of West Midlands archaeologists and museum assistants suggests that their professional colleagues have been rather slower to discover the delights of teaching. With surprise and delight they report success in popularizing their subject, but their somewhat defensive attitude hints at concern lest senior diggers rise

in wrath at this debasement of their mystery, insisting, perhaps, on "the dead weight of academic exactitude".

The experiences described are all useful and suggestive. Mike Corbushley, an old hand with feet in both camps, leads off with confident generalisations. Thereafter, most confine themselves to sober reports of showing off sites, preparing videos, computer programmes and teaching packages, stimulating drama and role-playing (another contributor remarks snily on the dangers of "parodying the past by attempting to 'recreate' it for a afternoon") and experimental archaeology with a medieval pottery kiln; here the historians of Kettering G S excel themselves, determined to rival the much-publicized enterprise of their snailie-trucking scientists.

There are plenty of sound ideas for teachers here, as well as for neohumanists, albeit ways in which the professionals can cross-fertilise.

T C



An illustration by Stephen Levis from *Finch MacCool and the Small Men of Deeds*, a traditional Irish story, retold by Pat O'Shea, in which the tallest, wisest, bravest and (when necessary) rudest man in all Ireland sets out to discover who what is stealing the giant king's children. Oxford University Press £5.95.

corded sessions and video-tapes. The account of Buddy's development is entirely convincing - his moodiness, his anxieties, his first experiences with groups, and especially the ecstatic release of vitality when he performs with the group.

However, his success story is set against the accelerating failure of his marriage. The marriage, the

Buddy composes, enabling this largely inarticulate youngster to find words for his distress. There is an exciting climax and a satisfying ending, which is hope-ful without being sentimental. Nigel Hinton sidesteps the difficulties of seriousness and tone by creating convincing characters who take their lives seriously, and the result is an absorbing and substantial story of breaking

BOOKS

The search for sources

Harold Silver reviews some new approaches to studying the history of education

The London Experience of Secondary Education. By Margaret Bryant. Athlone Press £25. 0 485 11302 3
Unsung Educational Provision in England and Wales: The Nineteenth-Century Roots. By William F. Marsden. Woburn Press £24. 0 7130 0178 X
A History of Secondary Education in England 1800-1870. By John Roch. Longman £28. 0 582 49703 5

The Education Papers: Women's Quest for Equality in Britain 1850-1912. Edited by Dale Spender. Routledge & Kegan Paul £25. 0 7102 1125 0
Education, Literacy and Society, 1830-90: The Geography of Diversity to Provincial England. By W B Stephens. Manchester University Press £35.50. 0 7190 2237 1

The history of education is no longer, internationally, the discreetly and intensively taught subject it once was. Paradoxically, however, there is an unabated, scholarly interest in the field. With an ageing community of scholars, however (three of the five authors reviewed here are retired), where the next generation of scholars will come from is another question. There is, in fact, a vigorous output of high quality dissertations and theses in the history of education, but few of the students are or will be in jobs which will enable or tempt them to sustain a scholarly interest in the field. For the moment, however, the journals and the books continue to appear.

The subject itself is no longer what it was, and this more than anything explains its continued strength. It has learned from, penetrated, and been penetrated by, other disciplines and other sub-histories. It has become an urban and a rural study, demographic, family and childhood-history, community and literacy-centred, concerned with social structure, elites and power, social and educational anomalies and diversities. Students and scholars are coming at the history of school and educational processes from other histories, ethnography, population studies, systems analysis and, still, from education.

Marsden is one of the most important inventors of the field. He comes at it from many directions, including urban history and sociology, but primarily historical geography. It is good that his contributions to a wider interpretation of the educational past are now (supplemented) accessible in book form. His approach to local and regional variations - in schooling, decision-making and responses to Whitehall, for example - is a sensitive and illuminating exposure of the subtleties in what were previously perceived as the broad sweep of movements and changes. He is concerned with variations in school provision and appearance, urban (and neglected suburban) phenomena, education in the battle over leisure, the statuses of schools, and the blurred edges between accepted categories of schools. If there is a single methodology at work it is a combination of quantitative and investigative insights. If there is a single theme it is how to explain historical differentiation. The geographer and the historian combined here offer a new impetus to the process of rescuing understandable variations in the history of our educational legacies. Marsden's is one of the important new voices to have emerged in this field in the past decade.

The history of literacy has been another important extension to interest in the history of education - including in the United States and across Europe. Stephens's study of the mid-nineteenth-century is the most substantial and most important British contribution in this area to date. It sets out to establish a base on which the range of regional differences and variations can be examined. It is cautious about its own methodology and data, but points firmly in a number of directions that scholars will undoubtedly follow. Like Marsden, Stephens is anxious to combine statistical and observational insights, looking at different types of community, at what is known, and what can be deduced about differences in levels of



Princes Street, Edinburgh 1857: the Revd Thomas Guthrie in his Ragged School

geographical vantage he attempts correlations between literacy levels and not only rural/urban divisions, but different kinds of towns (size, small market town, small manufacturing town, Industrial Revolution town and so on). He explores the effects of land ownership, religion, occupational structure, servant migration, type and efficiency of school, and more, on literacy levels and their movements up and down.

In the process, Stephens also investigates the roles not only of the voluntary elementary schools, but also of, for example, Sunday, Factory and Ragged Schools, and of different levels of middle-class support for school provision - as well as differences in attitude. There are differences traced to proximity to Scotland or to London. Whichever cautions there may be about the state of this kind of art, there is no doubt that Stephens goes a long way to establishing for Britain what some scholars have recently established for the United States - some of the ground rules for exploring diversity in literacy, in education, and in the factors affecting both. Stephens points meticulously to questions not yet or not sufficiently unanswered - including those questions not susceptible to quantitative solution. There are starting points for historical themes where edges are blurred and categories and explanations not neatly packaged. The one important categorical thread running through the book is the view these diversities confirm that the 1870 Education Act was a necessary measure. In a variety of contexts, and in a variety of ways, the voluntary system was failing to cope by the 1860s. To have harnessed this range of sources and analyses to that judgement almost alone makes this a crucial book.

Marsden and Bryant, dealing with the ancestry of "secondary" education, are from more familiar territory, but both bring new guidelines to their incursions. Roach's general study, and in 1870, is the first of a projected two-volume history of nineteenth-century secondary education. A central message is not to impose our neat twentieth-century categories of elementary, middle and secondary on to nineteenth-century schools. He underlines the complexity of schooling in a difficult operation.

By the seventeenth century, the book demonstrates, what were intended as "permanently" foundations had been overtaken by history. Social change made some schools obsolete or the victims of conservatism. New "great schools" towards boards

of schooling. Roach tells a diffuse story of struggles for control, disparities in management and curriculum, the roles of heads and reformers. Schools emerge at different points in the story as rounded pictures of legal entities, curriculum and people. There are preparatory schools and proprietary schools, commercial schools and girls' schools, the careers of teachers and pupils. The story involves attempts at the reform of the schools and at the improvement of poor conditions before the 1860s, and the impact of the Clarendon and Taunton commissions in the 1860s, as an essential process of central reform. The book, while aware of the world that surrounds the schools, sticks closely to portraying their range and variety and the processes and governing factors of change. Here again there is caution expressed about the use of statistics, plus "reasonable guesswork" where appropriate, and the results of a massive search for sources. Roach's work is much more an operation to systematize an existing part of the field than to open up new explorations.

Bryant's scale (in terms both of chronology and the size of the book) is different. Her work is also rooted in an attempt to portray and understand diversity. It is about London, but it is not strictly speaking urban history. The phenomenon of London is, indeed, constantly present, in explaining the growth of institutions, curricular change, factors affecting school survival or removal, London's "prodigious and unpredictable" educational developments are set amid court and City, changes in population and suburb, economy and ideology. There is a constant effort to distinguish, as appropriate, between London and national developments - though the balance, amid the extensive detail of school provision, is not always easy to strike. London - especially the City - occasionally comes vividly alive, as children play behind the railings or romp in the street. But even on the scale of this book, keeping hold of the complexity of London together with the complexity of schooling is a difficult operation.

By the seventeenth century, the book demonstrates, what were intended as "permanently" foundations had been overtaken by history. Social change made some schools obsolete or the victims of conservatism. New "great schools" towards boards

on, Bryant's book adds a very considerable new dimension to the familiar field of secondary education. Here, as in the work of Roach and Stephens, there is the problem of following diversity through the aggregation of examples; but here also the result is not just increased familiarity but also new insight.

Spender's book is of a different order and intent. It is a collection of (mainly late) nineteenth-century documents, illustrating the context and nature of the women's movement for educational reform. Rescuing this tradition and demonstrating the inadequacy of a male-centred history has become an important new interest in the history of education, but though Spender's book is a helpful addition to the literature in one sense, it is disappointing in another. The documents are repetitive, there is no editorial machinery to indicate where they appeared, how important they were individually, what audiences they addressed. Above all, while they focus on the women's educational movement, there is no recognition that this was a middle-class movement. There is no hint in the book of the fact that working-class girls fared equally well, or badly, as boys from the beginnings of mass popular or elementary education. In that sense the book is misleading. It is about the education of "young women of the higher classes", and by not making that fact explicit, the book can lead the unsuspecting reader into believing that this is the whole story about nineteenth-century girls and education. The politics and ideologies of women's equality have in fact displaced the experience of the majority of girls from the story completely.

What all of these books indicate, therefore, is the broadened range of historical endeavour in education, a tenacious search for new sources and understandings, and in most cases a sense of vigorous and wide-ranging scholarship. This field, at least for the moment, remains a scene of activity. New methodologies, for instance Maraden's, suggest new interpretations. New extensions, for instance Stephens's, redefine the field. Recommendations, such as Roach's and Bryant's, offer new profiles and insights. Education, as a result, becomes more firmly and subtly grounded in historical missions to understand the sources of the common and diverse features of contemporary society.

And a prize to the Athlone Press, publishers of Margaret Bryant's book, for by far the best design and presentation, and a bargain to boot.

Harold Silver is principal of Bournemouth College of Higher Education, Reading.

Making Sense

The child's construction of the world

JEROME BRUNER and HELEN HASTE

This study examines how growing children come to make sense of the world around them. The author looks at current research on child development which emphasises the importance of problem solving and social interaction in this discovery process.

October 224 pages Hardback 0 416 38240 1 £25.00 Paperback 0 416 92490 5 £17.95

Being Skilled

The socialization of learning to read

STUART McNAUGHTON

Drawing on extensive research from Britain, Australasia and North America, McNaughton examines how interactions between teacher and child direct the task of learning to read and how the relationship between home and school can strongly influence a child's success. Reading is seen both as a symbolic skill with important implications for development and a social practice in which learning is achieved through problem solving.

November 270 pages Hardback 0 416 98327 2 £16.95 Paperback 0 416 95102 5 £6.95

Common Knowledge

The development of understanding in the classroom

DEREK EDWARDS and NEIL MERCER

In the context of current debate about teaching methods and the structure of education, *Common Knowledge* proposes that education involves the development of shared understanding rather than just the exchange of knowledge. The authors draw on a rich background of classroom dialogues to illustrate their arguments.

260 pages Hardback 0 416 38800 1 £25.00 Paperback 0 416 39900 2 £9.95

METHUEN

RESOURCES

Space and time

Modular Secondary Science Resources
— Volume 2
ILEA and John Murray
£12.50
John Murray

Readers who have already used the first of the three volumes in this series will need no encouragement to invest in the second. It is another treasury of excellent material for those who teach the three separate subjects as well as for those who teach combined or integrated science. The team of authors had no particular syllabus in mind nor did they prescribe any particular educational philosophy; their sole objective was to produce a source book full of good, sound teaching.

They are to be congratulated on a most lively and exciting document. It is clearly written, delightfully illustrated, and inexpensive particularly in view of the fact that restricted photocopying is included in the price. It has a feeling of space and time associated with it and there is a most welcome air of authority that admirably reflects the wealth of teaching experience that the project team was able to draw upon.

Each of the three volumes has three sections; this volume covers an essentially biological section on "keeping warm and keeping cool"; there is one that will be invaluable to a chemist on "particles" and the third on "light" obviously has the physicist in mind. In addition there is a substantial and most useful introduction. Ideally one would work through each section, but time would run out, particularly if full use was made of the many resources that are listed at the end of each unit. The intention is rather to enrich the teaching of science by making it easier for the teacher to be selective and so build a course that will really suit his or her students. There are many simple but useful exercises and attention is also paid to the development of social and personal skills and awareness.

Joseph King

notes

NEW READING PROJECTS

"Clear Vision" and "Braille for Infants" are two new reading projects from the Royal National Institute for the Blind.

"Clear Vision" introduces visually handicapped infants to books by incorporating colourful print books interleaved with transparent plastic sheets with braille text matching the print on the opposite page. It is allowing sighted and blind children to read together. "Braille for Infants" is a reading scheme of 27 reading booklets with tape accompaniment of illustrative jingles and rhymes.

Details are available from the Royal National Institute for the Blind, 224 Great Portland Street, London W1N 6AA.

'HEALTH RELATED FITNESS: ITS PLACE IN THE SCHOOL CURRICULUM'

NORTH WESTERN COUNTIES
PHYSICAL EDUCATION ASSOCIATION
present

A VIDEO
AND ACCOMPANYING RESOURCE PACK
With commentary by Ron Pickering, OBE

For further information and order form, contact:

Mr J. M. YOUNG
2 Vanderbyl Avenue, Spital, North Wilt
Merseyside L62 2AP, United Kingdom

(2540)



Fashions from the V&A's 'Britain Can Make It' exhibition

Illustrative

The Design Council's picture library has expanded.
Sarah Farley paid a visit

As design increasingly becomes a cross-curricular activity for children aged five and up, the value of the Design Council's picture library grows. Teachers familiar with the area can browse through the collection of 35,000 colour and monochrome slides, and 80,000 black and white prints, selecting as they go, while those who have not much experience in teaching design are carefully guided by the librarian into choosing a suitable pack.

The Design Council has just completed a restructuring of its picture library, housing it in a larger, better equipped room.

"Quite a variety of people use the library," says Judith Powling, the librarian in charge. "As well as teachers there are designers, design students, picture researchers, lecturers — anyone with an interest in design. About 60 per cent of our visitors are teachers, and they are usually taking classes of four or five pupils, including some from primary school teachers."

Several features make the Design Council's picture library particularly useful for teachers. One is that it is completely open access. You do not have to be a bona fide researcher or member of any organization. Anyone over the age of 16 can use it, and so can those under 16 when accompanied by an adult.

A second advantage is that it is free. Teachers can borrow up to 40 slides, prints, or two weeks. If they are chosen and collected in person, if they are posted, the charge is £1.25.

The collection covers all areas of design, including graphics, textiles, domestic products, interiors, furniture, medical equipment and engineering design. Some slides are of general interest, making it possible for borrowers to create their own packs to illustrate a particular theme. Other slides are very detailed, demonstrating how designers work, and requiring a more knowledgeable understanding of design.

There are also illustrations of exhibitions, including the Festival of Britain and Britain Can Make It. These are

supplemented by ephemera such as catalogues and press cuttings which cannot be removed, but can be studied as project material in the library. Although the majority of the collection deals with British design, there are some examples of important work from other countries.

The library is a useful resource for more subjects than craft, design, technology or social history. "We would also encourage teachers taking engineering and science to have a look at what we've got," says Judith Powling. "Already we have some slides which would be of interest and we are planning to prepare more case histories of engineering products."

She does her utmost to make sure that borrowers go away with a selection suited to their needs. "I try to pin down exactly what the teacher wants the slides or pictures for," she explains. "We sort out whether they are taking an A level, or GCSE course, or younger pupils, and what ground, if any, they have already covered."

Sometimes people are very vague about what it is that they want to get over — they say graphics, but do they really mean posters, and are they interested in the historical aspect or the technical? If it is the first time someone is using the library, it may be hard for them to decide beforehand what it is they are looking for and their needs develop while they are here. We talk a lot, and after some diplomatic badgering, they often leave with something quite different from what they expected."

Such personal attention is time-consuming; visitors are likely to spend half a day, or even a whole day, in the library. During that time, there will always be a librarian on hand to answer any queries and help trace particular slides. In order to keep the level of activity manageable, there is an appointments system, keeping a number of visitors to four. If someone does turn up without an appointment, Judith will try to help if possible.

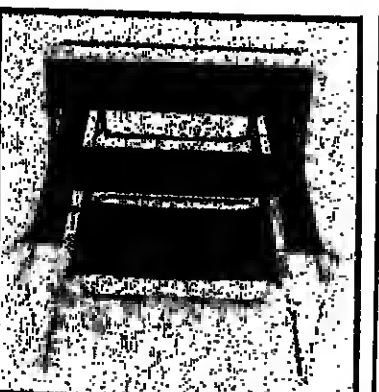
Seasoned borrowers frequently telephone the library to ask her to select and post slides to them, a system that works well once the teacher has become familiar with the library and its contents. Even first-time users can

telephone for their selection, but they need to be specific about what they want. There will soon be a catalogue available but with the number of entries in the collection, it will cost in the region of £10.

Some teachers use the library by planning well in advance, choosing a series of slides for the year, and asking Judith to post a batch off to them at monthly intervals for nine months. If someone decides to buy slides, they cost £1.00 plus VAT for each mounted and labelled slide. Only those with a Design Council copyright are sold through the library; names are given for other copyright holders.

The new picture library will provide greater opportunity for viewing slides and will also have video facilities. Already there are six videos (including two about the Schools Design Prize) and a series of reference videos on designers such as Toni Eckersley and Gordon Russell is to be developed for viewing in the library. In addition, it will be possible to preview the Design Council's range of teaching and learning audio visual aids in the picture library before deciding whether or not to buy.

The Design Council Picture Library,
2nd Floor, 28 Haymarket, London
SW1Y 4SU. Tel: 01-839 8000. Open
10am to 3pm, Mondays to Fridays.



'Wesely' chair by Marcel Breuer, 1926

Two hundred prototype kits being distributed to all local education authorities' science advisers were packed by High Artle school's pupil-run mini-enterprise company, giving the children insight into managing a business.

Five thousand kits are now being commercially manufactured for retail at £20 each. In view of schools' cash crisis, the hope is that businesses will buy them for schools in their area and companies in Wales and South West England have already expressed a willingness to do so.

The kit is planned as the first of a series to familiarize pupils with biotechnological concepts.

Further information is available from Christine Roberts, GB Biotechnology, 4 Beaconfield Court, Sketty, Swansea SA2 9JU.

Iola Smith

Basic training

Teacher education has always been an important area for the Open University. Thirty-three thousand teachers have received OU degrees, and every year thousands more take one of the OU's associate students. Further thousands go in for the more flexible, unassessed study offered by the Open University's study packs.

Unlike OU courses, the packs just contain study material, with no fixed assignments or tutorial support. They typically cost well under £20 each. You can study at your own pace, on your own, or set up a group to study together.

In response to teacher shortages in science, mathematics and technology, the OU has increased its range of courses and packs, and introduced a new Advanced Diploma in Technology in Schools. It has also made science, maths and technology foundation courses, until now only open to registered undergraduates, available to teachers as associate students. In technology, teachers can now take a course which is based on the technology foundation course (T101), geared specifically to teaching technology in schools. (Teachers who have already taken T101, can take a short conversion course.) And there is a new study pack, *Focus on Design*, about introducing technology into the curriculum.

In mathematics, current study packs include *Calculators in the secondary school*, *Smile! Investigation in the secondary school*, *Secondary mathematics: classroom practice*, and *Girls into mathematics*. There are another 10 mathematics packs to appear in 1988.

Also planned for 1988 in science, is a new initiative which is neither quite a course nor a study pack. *Physics for Science Teachers* is an educational package designed to train teachers whose expertise is in other areas of science — say biology — to teach in the shortage area of physics. The package covers physics teaching up to GCSE level, and would require about 10 hours' work a week, spread over the school year, if studied in its entirety, but teachers can also choose to study only particular topics.

The Open University hopes that i.e.a.s will release teachers for a few hours a week for this training, and perhaps provide group tutorial support in the shape of a science adviser or other local INSET provider. They have always tried to liaise closely with i.e.a.s, and hope that this kind of collaboration will develop further in INSET areas. *Physics for Science Teachers* may be the model of OU INSET provision for the future.

Many i.e.a.s have also been generous with financial support for their teachers studying with the OU, and under the DES GRIST scheme, which supports INSET in priority subjects, allocations can go towards OU courses and packs. However, there is now also an alternative means of funding for particular courses (not study packs) which has been made possible by a grant from DES made directly to the OU. There are 24 maths, science and technology courses which qualify for a special discount, bringing the cost of a full credit course down to £144, and a half credit to £84. This discount is on the associate student fee level, and it works out at less than current undergraduate fees. It is still, of course, a lot of money if teachers have to find it themselves. Do other workers have to pay for their own training development? Hopefully, authorities will pick up the rest of the bill.

Only one slightly sour note is struck. The Open University advertises its INSET for its cost-effectiveness to authorities, suggesting that the need for supply cover is reduced, as teachers study in their own time. With contact time always increasing, more and more time required for profiling and records of achievement, and the huge unpaid assessment demands of GCSE, teachers are wondering if any time is any longer their own. It says a lot for teachers' dedication that there have been something like 11,000 enquiries to the OU about this priority area INSET since its new programme was launched.

Jessica Saraga

Online

USERS AND potential users of the Archimedes should invest in *Archimedes*, an informative and readable new magazine edited by Paul Beverley. The first issue gives an insight into the problems faced by those trying to develop software that really takes advantage of RISC power, and provides hints and tips on getting around bugs in the operating system and ADFS disc system.

Although Beverley is clearly an Acorn fan, what emerges goes some way towards explaining why little if any true Archimedes software is ready or bug-free. James Lynn of Computer Concepts gives an interesting account of the challenge of simply converting *Inter-Sheet*, *Inter-Word* and *Inter-Plus* from the Model B/Master using the 6502 (8-bit) emulator. Ronald Alpar explains the tortuous business of getting a BBC Micro and Archimedes to converse through the RS423 port; this is useful if you have programs on 5.25 inch floppies and don't want to buy a 3.5 inch disc drive for the Beeb merely to effect the transfer.

Mike Beecher describes the musical possibilities and Beverley describes the desktop publishing package that Computer Concepts is developing. There are many hints and warnings, and software offers. *Archimedes* subscriptions cost £10 a year from Norwich Computer Services, 18 Mile End Road, Norwich NR4 3QY.

The Archimedes promise is tantalizing, though. Acorn showed an Econet linking a BBC Master, an Archimedes and an Amstrad PC-1512 fitted with a £299 expansion card in the Personal Computer World show last month. They also took £100 off its price, selling the basic box at £803, and showed it running MS-DOS software under an emulator at high speed. At this rate, it will be 1988 before we see what the Archimedes can really do, as opposed to how its software emulators perform.



RICHARD FOTHERGILL, formerly director of the Microelectronics Education Programme, is resigning from his post as director of the Council for Educational Technology, effective at the end of December. He'll have left within two years of Geoffrey Hubbard's retirement. Fothergill is not retiring, but continuing his European Community work and building up an independent, international consultancy as yet unnamed. CET, which has been through difficult times since its exchange of letters with the Secretary of State about the Price review recommendations which resulted in the new "alliance" model, is now advertising for a new director.

The QUORON Innovation Challenge reports a disappointing response from schools so far. I would have expected some of those first-wave TVEI schools to be winning with ideas for exciting new ways of using information technology, and the prize is appropriate to enterprising schools — £1,000, a trophy and a guaranteed commercial development. Telephone 0895 72617 (24 hours) for an information pack or type REQUEST-CHALLENGE on Telecom Gold. The deadline for entries is November 9.

JOHN SKAMAN of Kingston College of Further Education was the first reader to send a TTNS message. His reward is a plug for their five-week full-time courses in expert systems for teachers and lecturers. The next one runs from October 26 to November 27, and the course fee of £500 is partially eligible for grant under the GRIST. Contact him on 01-548 6508 or TTNS 01YQ1017.

Jacquetta Megarry

COMPUTERS/IT



Running orders

If schools are to manage their own finances, they will need to do it with micros. Clare Maclure reports

Local authorities must increase spending on information technology (IT) and re-think central computing policies if they are to cope with the Government's education reforms.

This is the view of IT consultancy firm Capita, which specializes in local government work. The company has pinpointed the proposal to transfer control of school budgets to head teachers as a business opportunity for itself and the computing industry.

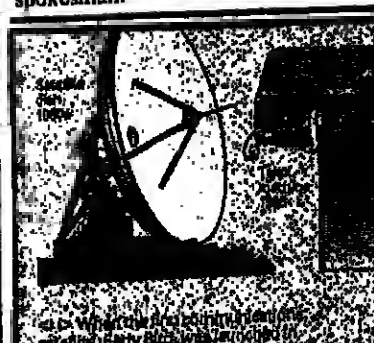
The proposal, which will be included in the Education Bill in November, means major changes for local authority central financial systems. It will also make microcomputers for administration in schools a necessity.

John Serle, IT manager at Lincolnshire County Council and chairman of the local government Society for Information Technology Managers (SOCIITM), says problems will be widespread. He estimates that "there is no authority with systems already in place of sufficient complexity to be able to cope with that level of local control."

The Inner London Education Authority expects to have to rewrite parts of its central mainframe systems to produce sensitive coatings about how each school works. The ILEA controls 1,000 schools with around 2,000 premisses. "Most authorities do not break down costs to premises level — and there are some costs which are almost impossible to break down in a meaningful way," says an ILEA spokesman.

A School Management and Administration by Computer system (SMAC) has been developed jointly by the council and Oxford-based Hytech Microsystems. It includes consultancy modules, databases for pupil and staff details and word processing. It can also generate around 100 standard forms. Now that the pilot scheme in Suffolk is well tested, Hytech hopes to market the system to other authorities.

ILEA also made a start last year, with a two-year programme to install standalone micros for administration into all its schools. It is piloting a more complex system in two schools in Wandsworth and Westminster. The Computerized Local Administration System for Schools (CLASS) was developed by ILEA and Resource Technology.



What is a computer made of? How does it work? What kinds of things can it do? How does it affect our lives? Four illustrated, information-packed posters from Macdonald set out to answer questions like these. The 'Information Technology Poster Pack' includes 'The Digital World', 'Digital Computers', 'Digital Communications' and 'The Digital Society'. The charts include brief discussions of such topics as computers in the home, computer aided design, computers in medicine, robotics and electronic mail.

The set costs £8.95 from Macdonald, Maxwell House, 74 Worship Street, London EC2A 2EN.

Legal rights

Vivien Irish on copyright law and software

In 1984 the UK software industry estimated that it lost £150 million a year through the illegal copying of its programs. A new law of copyright is now expected to come into force next year.

Software programs are all protected by the current copyright law. The legal position was uncertain until 1985 when the law was changed to make it quite clear that software is to be treated under the Copyright Act 1956 as if it were a literary work. This amendment makes it clear that loading software into a computer is an act of reproduction which can be controlled by the copyright owner.

When the education system needs to be able to copy something from a book (the Copyright Act gives limited permission to do so). Schools may reproduce material from a book in the course of instruction, provided no duplicating process is involved (no photocopying, such as a photocopier). So a teacher is permitted by law to copy short passages in longhand.

The reason that a photocopier can be used legally to copy a wide range of published literary work for a school is simply that blanket permits have been agreed with the copyright owners, with appropriate arrangements for payment from a central fund.

But the position with software differs fundamentally. There is no general agreement to allow copying of floppy discs.

Running software in a computer does involve an act of copying, so software programs always come with a licence, but this is only a permission to use the software. A back-up copy may often be made, for example, but this is purely for security purposes and permission is not given to run the original copy and the back-up copy simultaneously.

There is no standard format for software licences. Each company supplying software will have its own version with different conditions, but generally there will be no permission to copy a disc except to make a security back-up.

So if a teacher, only too conscious of the high cost of software compared with the low software budget usually available, yields to the temptation to run off further copies of a good program, he may be in breach of copyright law.

An interesting program used in another school, then these are illegal acts. Pupils too need to know about the law. Children copying each other's games and knowing that their teacher copies floppy discs risk developing bad habits which are carried into employment, where the sympathy of the computer industry for the financial plight of the education system does not reach. Believe it or not, most suppliers to the schools market specifically set their prices at a very low level.

The Federation Against Software Theft — FAST — was set up to publicize the law with the aim of reducing the losses to an important part of British industry caused by illegal practices.

Copying without a licence discourages software writing, which is bad news for everyone looking for a healthy UK economy supporting and funding good education at all levels.

Turning to the proposed new law — the current draft shows little change. Restrictions on use of software by schools are similar to those in the current Act. The only ray of light is a strong emphasis in the draft Bill on licensing, equivalent to the book-copying arrangements already in place. This may be the solution, but only in the distant future.

Vivien Irish works for the Federation Against Software Theft.

Next week

Next week's Computers in Education Extra will feature Joe Telford with guidelines on how to spend the education support grant for IT, and John Foster on the role of the Microelectronics Education Support Unit.

and teacher, with on-

STS)

ty to teach a cross
their curriculum.

TEACHERS
 Please give below:
 The Child Education
 returned by 23
 (153448)
Bedfield
an
ancill

ng
of Main Scale

tion Officer,
 sex.
 a: 8th
 37. (69474)

Employer

purpose and
and can offer

In the staffing
ificant oppor-
nel Junior end
ANUARY 1988.
newly trained
se returning to

X

ly qualified or
hosa wishing
d of absanca.
ba available.
vence. 100%
s payable to
ip permanent

Employer

purpose and
and can offer

In the staffing
ificant oppor-
nel Junior end
ANUARY 1988.
newly trained
se returning to

X

Education Department
An Equal Opportunity Employer

RD
E. E. ALFORD

EDUCATION DEPARTMENT
COUNCIL ROAD
ROUGH ROAD, BALFOUR
10 for January 1928
SCHOOL
+ S.F.A.
enthusiastic and enter-
prising research take respon-
sibility for a class of junior
-s in class
with a college
for professional
ment will be avail-
-ing
Development of the
sum and the organiza-
an ex-
-ool. An interest and
in music would be an
-end s.s.c. for ap-
-form and further
-the High Education
Education Office,
Street, Balfour N.S.
which completed
-s should be returned
October, 1927.

WARD
OF Salford
TRUST DEPARTMENT
WILLIAMSON COUNTY
SCHOOL
Willis Road, Salford
ER - MAIN
SIONAL GRADE
as soon as possible.
and enthusiastic
willing to teach in
many age ranges. In-
the post is in the
Department but a
to work with young-
Oren is important to
ool management sys-
state curriculum
and expertise.
and a.s.e. for op-
form to the Chief
an Officer. Education

Chapel Street, Salisbury, to whom applications should be sent by 31 October, 1955. 11dd4d

SHERBORN

WIMBORNE WOOD
SCHOOL
Mr. W. Webb, Avenue,
Sherborne, Dorset

For January
experience. Early
teacher, who will
mentally lead the
in class. 0 Maths
0 areas of the curri-
The post is cur-
held by a Ede 2
r. will be on Main

ings Octa 12 Octobor
ells from the Head
(15281) 118040

SHROPSHIRE

DOPE CASTLE COUNTY
ARMY SCHOOL
Meadow, Oishops
tle, Shropshire SY8
SAY

Shrop's Castle 035522
ato 03 for January
enthusiastic and com-
teacher to teach low-
color in the litt inst-
ment Scale).

icellens forms from

ing date Monday,
October, 1957
11dd4d

SHROPSHIRE

LSROOK GALE AND
CONBRIDOS C.E.
SCHOOL
En0, Coalbrookdale,
Telford TP8 10S
I: Ironbridge 0534

quired for Inquiry,
permanent, full-time
or for Upper, clients/
juniors. A swim-
qualification en-
tage,
lication forms, and

60 by 200 October
 41 (SAE required)
 110640

SHROPSHIRE
 K COUNTY JUNIOR
 SCHOOL
 h Road, Wellington,
 Tolfood TTF 328

ultured from January
 a temporary, for 2
 full time Main Pro-
 and teacher
 bishat of a Learning
 rt Teacher for chil-
 with Special Educa-
 Needs in the main
 school, ese rango

aining date: Monday
 6ember, 1887..

41
 110040

SHROPSHIRE
ARCHLEY COUNTY
OF FIRST SCHOOL
 of Centre, Shrophire,
 0000, Shrophire TF3
 1YQ
 01: Telford 08d701
 required for Eastar
 permanent, full-
 anthulaentic class
 er 140in Eastar for
 fente in the first inst-
 Please oata area of
 rriculum in which tho
 ant take lead.

lication forms and
a from the Head
(required).
01 10000 110540
11 10000 110540
11 10000 110540
11 10000 110540

EXTRA

Is craftsmanship being neglected? Save our skills

TED HEASMAN

As I write this article we are once again at a turning point in education, a time when we have to change course because of influences beyond the control of those, like myself, teaching in the classroom. I am thinking, of course, that my present fifth form students will be the last candidates to sit the O level GCE examinations, an exam which has been a constant thread throughout my teaching career.

I know times have changed, I know current educational thought has swung away from the narrow confines of woodwork and metalwork, I know that now we have more girls in CDT rooms than in the past, I know and recognize the value of the problem-solving approach and I know also I have a nagging worry in the back of my mind, an unease at the way things are developing.

I left Goldsmiths College in 1954 and in subsequent years have had good cause to be grateful for the comprehensive teaching received from John Eves and William Morgan. We were expected to have a problem-solving approach even then. I taught in London for my first eight years and this period coincided with the early days of the Design Council and *Design* magazine. We were encouraged to take pupils out on trips (there always seemed to be finance available for fares) so I took groups to the Design Centre as well as to the several museums which could provide inspiration for my pupils.

Designing and realization was an integral part of my teaching which in

the beginning was exclusively wood-based. Later, at a traditional, academic grammar school in Kent, I was able to branch out and teach engineering drawing and metalwork to O and A levels, still with the emphasis on problem-solving. But, and here is the nub of the worry, I am concerned the way the teaching of CDT is going; time and time again I found that I was frustrated, and that my pupils were also frustrated, by the lack of ability to carry out their ideas.

Skills are necessary. Pupils following either a basic CDT course in the first three years of the secondary school or those who are preparing for the new design-based GCSE exams will get little out of any course if the end result does not function as expected because of poor standards of workmanship. Work produced in the graphics room will not satisfy teacher or pupil unless the result looks good.

I am not advocating a return to the era of endless practice at a particular skill - almost the first question I was asked as a new teacher by my LCC Inspector was "and how many hours filling have you done?" - no, that time has gone for good, I trust. The time has also passed for the class exercise, when 20 artefacts made to more or less the same dimensions would be the end result of a term's work.

In place of this we are encouraged to set a problem for solution and expect the pupil to be able to pick up the necessary skill techniques in the process of realization. I have been fortunate to be able to review for *The TES* a number of the new books published

recently. Many of them have excellent sections on the skills and techniques necessary for the successful completion of projects, but my experience has been that this really is not enough. Time must be given to the pupil to learn by mistakes, surely a well-earned method in any sphere, so that the end product will satisfy.

When I look back at my teaching it is interesting to see the way I have switched from the idealistic design-based, problem-solving approach to more formal skill and technique teaching and back again. Idealistic? Yes, I would submit that this is so. If the pupils in our classes were all of equal intelligence and motivation, if the numbers in our classes were consistent with the variety of work going on and the demands such variety imposes, if all the necessary resources of space, reference and equipment were ideal then I would have few worries.

My main concern with the new exams is that our fine tradition of craftsmanship will be eroded away. Do we expect colleges of further education to make good the experience previously gained at secondary school? Is it the intention that the Manpower Services Commission who have the funds denied to schools should provide the skill training through YTS, YOPS or similar schemes? Will the TVEX programme provide the solution? Will we expect employers to welcome our pupils when they eventually find out how poor they are in basic technique and understanding of standards and values? Am I being too pessimistic in seeing a time when the GCSE Design and Realization or Design and Communication exams are taken only by those who are traditionally O level candidates, because these exams are found to be too demanding on teacher and student alike, and that they do not meet the need for personal satisfaction in a job well done?

A year ago I wrote in these pages concerning my worries for the design and communication syllabus. It appeared under the apt title "Are you



future students following the new syllabuses? Somehow I think not. Of course I know that these students are a tiny minority of those taking the design and communication course, and an even smaller percentage of the total number leaving the fifth year, but they are significant for the relationships we have built up over the years with local firms and the community in general. I welcome the new examination syllabuses for the freedom they bring from the restrictions imposed by O level requirements; too long we have had to teach, for example, involutes, hyperboloids, second auxiliary views and similar irrelevances, but I am intensely concerned for my students that they will not achieve the high overall standard which used to be essential.

In particular, there is a distinct lack of understanding and experience in what can be described as traditional engineering drawing, orthographic projection of familiar, and in some cases unfamiliar, objects. I know that this subject area is an anathema to some but I am convinced of the value it has for presentation standards and the discipline of orderliness. For a number of years I have seen students leave school to take up Drawing Office apprenticeships with local firms - will these same firms be as welcoming to

Ted Heasman teaches design and communication at design and communication at the Bishop Bell C of E School, Eastbourne.

Birthday tribute

The 20th anniversary of *Studies in Design Education, Craft and Technology* deserves applause and a few words of appreciation, for there are few publications in the CDT field that can claim to have earned academic recognition - all with the same editor in charge: Professor S John Eggleston of Warwick University.

As a brother editor I understand and sympathise with any colleague who has to obtain papers for publication from the CDT fraternity, for although they are learned professional teachers, they are not renowned for the facility with which they pick up the pen to record their activities in school and college design studios. They are generally too busy working on their teas to write them up for publication. The trauma of discovering and then persuading reluctant authors to contribute their experience is severe and chronic, so anyone who has mastered the art deserves the accolade for this skill.

A few words should be said about the origins of *Studies*, for although John must worthily take the credit for the journal's survival and success, he cannot claim responsibility for its birth, which took place at a College of Handicraft council meeting in 1966, under the chairmanship of the then Dean, Mr CW Windle, when it was decided that the College should sponsor its own journal, which would be designed to provide research papers and learned treatises on developments in handicraft teaching.

Although *Practical Education* was the official journal of the Institute of Handicraft Teachers and had been

publishing news about aspects of craft teaching since 1901, the College council felt that a more academic publication was needed. We must recall the great changes that were taking place through the development of the CSE, the new design and technology examinations, the early Schools Council reports, etc. It was a ferment of new ideas that required a new forum for their dissemination and debate. So the *College Journal* was launched and the late George Day became its first editor, but although the aims and intentions were high, unfortunately the available funds were not, and it soon became obvious that the journal could not be maintained by the College council.

Fortunately, John Eggleston offered to discover sponsorship and took over the editorship, renaming the journal *Studies in Design and Craft Education*. Since those days progress has been steady and the new publication has extended its influence as it has changed its title to keep abreast of the developments recorded in its pages.

All the innovators of changes in CDT have been contributors to *Studies*, and a scrutiny of its pages will delineate the whole recent history of creative practical education in our schools. I, on behalf of all the teachers, lecturers and advisers who have gained from a study of *Studies*, wish John continued success, and many more birthdays!

Peter Dawson

Peter Dawson is editor of *Designing to Make*, the journal of EIDCF.

Searching for syntheses

continued

with the profoundly sensible policy of regarding science and technology as the continuum instead of craft and technology. This will provide the proper scientific rigour to develop its application in technology and to place craft or workshop skills in their proper perspective as a means of achievement and not as achievement in itself. Design remains the innovative element linking market needs to creative endeavour. In that sense it remains a methodical process, akin to management with flair, also fed technologically by information and models. Design is ill-served by the personality cult.

Abandonment of traditional barriers to schools is occurring very slowly by hard-pressed men and women battered by rapid curricular changes. The process could be speeded up by a new generation of science and technology teachers derived from undergraduate courses combining science and its application through technology, a design theme to provide innovative stimulus and an understanding of market and production. Schools are desperate for such cross-curricular skills and the examination boards and Secondary Examinations Council would enjoy a freedom not bounded by tradition and history.

Professor Dawson is Dean of Education and Design at Brunel University.

EXTRA

The BP Fellowship: a shot in the arm for Scottish education

Design in oils

DAVID FENDER



In January 1985 I received a telephone call from BP's education co-ordinator in Scotland. It was the first indication that something of special significance was about to happen in support of design education. Significantly, too, this was the first large offer of financial aid to be made to Design Council Scotland by a major industrial sponsor.

Earlier discussions between the Higher Grade joint working party in craft and design and BP Oil during 1984 had resulted in the award of a BP Fellowship of £36,000 for use in support of the design element of the craft and design course of Standard Grade. It had also been agreed that the Fellowship should be based in the Council's offices in Glasgow and that the Council should be responsible for the administration of the project.

The first task was to identify candidates of the right calibre and enthusiasm from the ranks of technical education teachers - not an easy task when so few had any background in design. Advertisement of the Fellowship elicited a large number of applicants, but in the end only two candidates were interviewed. One of these was Donald Stewart, principal teacher of technical education at the James Young High School, Livingston, who was appointed as the BP Fellow for the first 18 month secondment of three days per week which commenced on January 3, 1986.

An overriding consideration during the writing stages was that the materials should comply with the aims of the design element of the craft and design course; in fact the materials are suitable for all design and realization courses, whether at Standard Grade, Higher grade or GCSE, and can be used as starting points or to reinforce previous learning. Indeed, the development of the resources has broadened so that they are now applicable across a much broader age band and the material is suitable for use in upper primary as well as beyond Standard grade.

The appointment of someone from the ranks of teachers was, of course,

correct. The BP Fellow had to be someone who understood technical education and the needs of its teachers and pupils. However, it had one serious drawback: few teachers have the opportunity to keep in touch with the world beyond the classroom. Consequently, the first task was to ensure he became aware of the needs and attitudes of teachers and current practice in the colleges of education as well as in design practices and industry.

To this end a series of visits were mounted so that Donald Stewart could begin to grasp the measure of his task. It takes time for anyone to assimilate, let alone absorb what lies outside "one's ken", but background research is almost always worth while. In Donald's case it paid dividends and it wasn't long before a production programme had been worked out, based on teacher's needs, and agreed with the Fellowship's evaluation committee.

The most urgent of these needs were resource materials that explored the basics of aesthetics, ergonomics and sketching, and these formed the target for Phase 1. Phase 2 would concentrate on product analysis, a second pack dealing with sketching, starting points for design briefs and working at speed - a series of speed tests based on knowledge and understanding of design. Phase 3, which takes the Fellowship to December 1988, will produce material that embraces modelling techniques, folio production and design strategies, although in the light of experience and changing priorities, these may be altered.

As research and the writing of the Phase 1 materials progressed, it became apparent that the task was beyond the physical ability of one part-time person, and other contributors had to be found.

understand their implications and relate them to their own lives. The originality of the BP Fellowship packs lies in their immediate suitability for use by teachers and pupils in the classroom.

The Fellowship has also been at pains to ensure teachers are not left to devise their own teaching strategies, so each page of information includes questions which pupils are required to answer, thus adding considerably to their knowledge and understanding of the complexities that may arise from tackling a particular design brief. Another important plus is that each "taskcard" carries explanatory illustrations that are linked to the textual questions, so ensuring the teacher possesses activity-based material which she is free to expand upon and improve as needs and expertise dictate.

The rush to produce materials in time for teachers to use in the standard-grade course which commenced in August 1987, meant that it was neither feasible nor possible to "trial" the materials in schools prior to publication. However, as the materials were written they were also being tested by the authors in their schools. This factor proved invaluable and led to the introduction of many changes as the teachers tried them out with their pupils. Nevertheless it is important to recognize that in the effort to publish in time for a forthcoming major national conference in May 1987, it was impossible to test in depth or to undertake major changes in the content of the slide presentations, for example, which are a feature of the aesthetic and ergonomic packs.

There are quite a number of publications on the market that concern themselves with such titles, but it is fair to say that none adequately meets the requirements of teachers who are unfamiliar with the topics, and none is treated in a way that enables pupils to

packs by two of the writers. Ever mindful of the fact that it had not been possible to thoroughly test the materials, a four-day dissemination conference was organized that would be used as a launch and teach-in of the resources. BP responded by making the training-centre at the Grangemouth Refinery available for this purpose as well as providing meals and hotel accommodation for the delegates.

Significantly, both the conference and the resources were highly praised by the delegates.

What of the future? The Fellowship continues until December 1988 when Phases 2 and 3 will see the completion of some 9-10 packs of teaching resource materials. At the time of writing I am uncertain whether the BP Design Fellowship will be continued beyond its allotted three-year span. What is certain is that BP Oil will have received value for money, that, in providing a Design Fellowship it has given design education and all design realization courses a "shot in the arm" of major significance. Of no lesser importance is the manner in which the fellowship engendered a team spirit that brought together an officer of Design Council, Scotland, teachers of technical education, a senior adviser with Lothian Region Department of Education, the Scottish Education Department, the Scottish Curriculum Development Service and members of the Central Support Group in Craft and Design.

Just as design problem-solving cannot be worked through in isolation, neither can teaching resources that are to be of any real and lasting value. In terms of collaboration and co-operative input, the outcome of the BP Fellowship can be held as a shining example. Progressed by a few, the debt is the greater of the many who stand to benefit from their labour. Curriculum planners, headteachers, principal teachers and teachers have much to learn from this enterprise where co-operation and a pooling of knowledge and expertise has been the name of the game.

David Fender is Education Officer for Design Council, Scotland

MAKING THINGS WORK

An introduction to design technology

KEN SHOOTER ■ JOHN SAXTON

an activity-packed foundation course in design technology — for use in the first three years of secondary school

- a wide range of design technology materials organised under four main headings: **energy, electronics, structures and mechanisms**
- emphasis on design and technological problem-solving
- extensively trialled in secondary schools
- designed to be equally appealing to girls and boys
- provides an excellent basis for later studies at GCSE level

96 pp. c. 150 line drawings/tables

32 photographs

0521 339707

Paperback £3.50

Teachers! Send for your inspection/evaluation copies now by writing to Liz Wilson, Inspection Copy Department

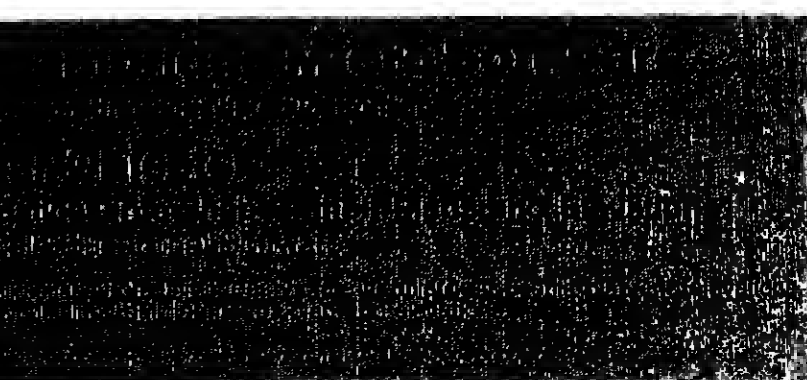
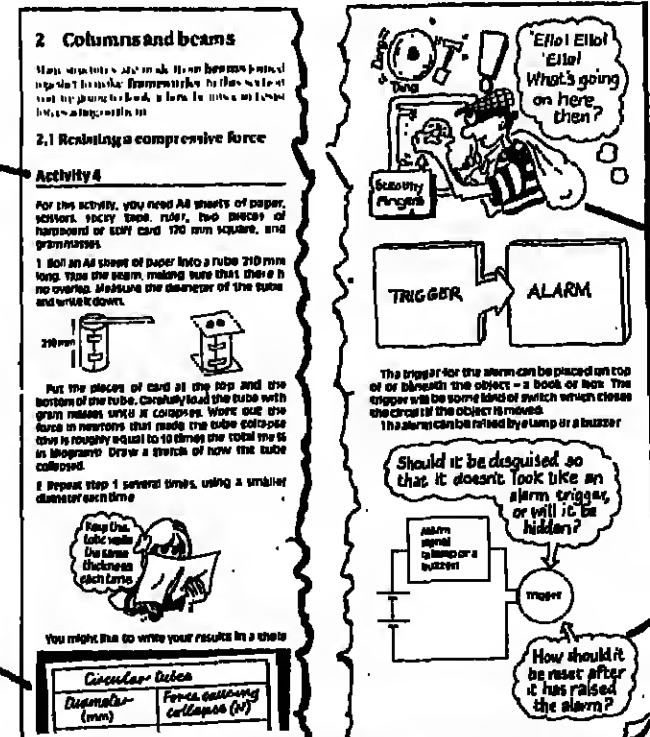
EMPHASIS ON DESIGN IN TECHNOLOGY

full of practical activities and projects

pupils encouraged to make individual records of their activities

plenty of illustrations — diagrams, photographs and cartoons

real opportunities for problem-solving throughout the course



Cambridge University Press
The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU

EXTRA

An architect in residence

Street walking

HERBERT WILLIAMS

draw it. There's a blockage with many people - not just children - they say 'I can't draw.' But I told them, don't think about it, just do it.

I showed them slides of buildings and talked about bits of buildings - gutters, for instance. I got them to note down what materials were used and why things were necessary. The idea was to stop them taking anything for granted in buildings and to see them in a new and fundamental way.

"To be truthful, I was learning from them as much as they were learning from me! There were 30 in each group, and I soon found that you can't talk to 30 kids for more than 10 minutes before their attention snaps."

He smiled as he recalled their first venture out of the classroom. "It was January and freezing. The other thing he clearly remembers is that the children had to be taught to look at the tops of buildings. 'But that goes for us all. How often do we look up?'

Crickhowell is a very old town on the River Usk with the remains of a castle, a 13-arch stone bridge and hostels bearing evidence that it once stood on the stagecoach route between Gloucester and Carmarthen. It also has some handsome Georgian architecture. One way of training the children to see familiar things in a new way was to provide them with two maps, one a new one and the other dating from 1760, and to point them to the colour in those buildings on the modern map which were also on the earlier one.

"We talked about the reasons why some streets were as wide as they were, why the old town hall had gone and why the castle was sited where it was," said Mr Harvey, who admits that the boys and girls knew more about their town than he expected.

One exercise involved their imagining that an existing building was no longer there, and deciding what should be put in its place. The most startling idea was for a huge modernist cinema

slap in the middle of a street noted for its old-world charm.

Another exercise gave them the chance to visualize what the community centre in the school complex ought to look like. It is, at present, a plain sort of building, but it wouldn't remain so if these pupils had their way. In their imaginations they covered it with graffiti of the most inventive kind, as well as some pretty colourful murals. Not surprisingly, the man in charge of the centre took a dim view of some of the ideas.

One of the pupils I met at the school was 13-year-old Rachel Williams, who was born in Ireland and has lived in Crickhowell for three years. She favoured putting anti-litter slogans on the walls of the community centre, and said the project as a whole had taught her how buildings blend together.

Joanne Griffiths, also 13, said it had made her more aware of perspective. All the pupils taking part in the experiment do so in time devoted to craft design and technology, and the head of the department, Geoff Bradford, thought it had taught them valuable lessons in the way materials were used, and in why buildings were designed and sited in a particular way. As for the department as a whole, he is keen to "create a more human environment, with lots of things going on."

Roger Davies, previously Director of Studies at Camberton Village College in Cambridge, has been headmaster here since the school opened. He believes that bringing experts like David Harvey into the school is stimulating for both pupils and staff, and he has previously had a jeweller in residence, an artist in residence and a writer in residence. The writer was Jeremy Sandford, of *Cathy Come Home* fame. "It's marvellous having people like this involved in the life of our school," he said. "They provide a particular skill and improve the creative thinking and creative output of the youngsters they work with. The children are bound to gain from working with someone who isn't a teacher."



Architect David Harvey with pupils from Crickhowell High School: 'the idea was to stop them taking anything for granted in buildings...'. The project took place in CDT lesson-time

Sparklers

PHILLIP ROBBARD

Brunei University is currently developing a range of new learning materials for both CDT and physics. The development of these materials is the second stage of a major project funded by the Electricity Council.

The project team consists of a number of experienced practising teachers who, during the syllabus and material analysis stage of the project, have all identified a number of gaps in provision. The Electricity Council, recognizing the necessity of providing accurate and useful learning materials

which are applicable to current exam needs, have provided the necessary funds for each teacher on the team to develop their own particular learning resources. These materials will eventually be available at little or no cost from the "Understanding Electricity" catalogue.

The CDT materials currently under development which will be available in the not-too-distant future are:

a) A pack for the GCSE structures module, consisting of a set of worksheets with accompanying teacher's notes.

b) A set of information sheets on "Heating Materials" designed specifically for A Level CDT, although much of the content would be suitable for use in CDT.

By involving teachers throughout the development process, materials can be designed specifically to cater for the curricular needs of the particular target audience. Special attention will also be given to the method and style of presentation, to make the learning materials as motivational as possible.

Today there are a growing number of responsible producers like the Electricity Council, who are actively trying to provide a real educational service which is geared to the needs of the classroom and curriculum. The free or inexpensive materials produced by these organizations, where only a very limited promotional activity is used (such as company logo), should help the teacher who is often faced with a limited budget and the necessity of providing interesting up-to-date learning materials.

Heinemann
CDT in Action

An exciting new series of textbooks and project sheets for 11-16

Starting CDT

Kellie Good

435 75400 9 £3.95

* a foundation course for 11-14

* introduces the design process through typical pupils' experiences

* short, simple text

* concentrates on practical aspects

* easy-to-follow diagrams

Textbook available now Projects Folder available Spring 1988

Craft, Design & Technology for GCSE

Peter Toff

435 75990 6 £4.95

* a coursebook for pupils taking GCSE

* concentrates on the design approach to CDT

* 'Test Yourself' questions check understanding and are ideal for homework

* full colour chapter demonstrates in detail application of the design approach to a particular case

* clear text, easy-to-follow diagrams

Textbook available now Projects Folder (by Peter Shipley and Ken Webster) available Spring 1988

Inspection Request Form

☐ Starting CDT
435 75400 9 £3.95
Name _____
School _____

☐ Craft, Design & Technology for GCSE
435 75990 6 £4.95
Address _____

☐ Sample material for both project folders
Please tick and return to: **Heinemann Educational Books**
FREEPOST NH3746, Sanders Lodge Estate, Rushden, Northants NN10 9BR

WASTE NOT,
WANT NOT



Michael Grater's Fun to Make books are packed with different fun projects. Enticing artwork and convincing photographs show how to make almost anything from scrap materials like plastic bottles, paper cups and plates and cardboard boxes.

Fun Faces Fun Figures Fun Models Fun Movers
Hardback £4.50 each Paperback £2.95 each

Macdonald
A BPOC PLC company

EXTRA



The emphasis of the subject has shifted from craft skills to hard materials to ideas and ingenuity, and is no longer the preserve of the 'big boys'

CDT is flourishing in primary schools

Mind over muscle

JOHN EGGLESTON

Until 10 years ago craft, design and technology, like the woodwork and metalwork that preceded it, was a no-go area for primary schools. The work shops where it happened, with their big benches, heavy machinery and inflammable materials were strictly for the big boys - and more recently - for one of the big girls too. Now all is changing and exciting new developments in design and technology - with children from top juniors to infants - are burgeoning in primary schools all over Britain.

Why has all this happened? Perhaps the most fundamental reason is that no part of education for contemporary society can ignore the ways in which things are designed and made, how resources are generated and how the economy, with its pervasive effects on individuals, is built around them. No child can wait for secondary education to realize all this: it lies to be at the heart of learning from the outset. The material world has also become one of the key areas of human expression; the emphasis on expressive activity in the primary school has to recognize this.

We can also see more clearly than ever before that individual creativity is vital to our future and cannot be wasted. Its first flowering - sometimes the only one - is in the primary school. Design and technology must be there ready for it, otherwise the education of our most able young people will continue to ignore the world of designing, inventing and creation.

But how has all this become possible? Part of the answer lies in the changing nature of craft, design and technology. The emphasis of the subject is no longer on craft skills in hard materials, involving strength and precision, often at near apprenticeship level and which cannot be done without highly specific teachers and equipment. Instead the focus is on ideas and achieving solutions. It has become more an activity of mind rather than muscle and often with the simplest

materials. From almost total incompatibility the subject has become highly compatible with the practical exploration and expression that characterizes modern primary education. It happens in the classroom, fully integrated with the other activities of the classroom, through projects, investigations and themes of everyday relevance.

Ten years ago it would have been inconceivable to list technology as part of a national curriculum for primary schools; today it seems not only logical but also unquestionably feasible.

What are the activities that characterize work in the primary schools? The range is enormous. Primary school finalists in the Young Electronic Designer Award Competitions have included simple but inspired electronic devices to regulate cycle lamp outputs, dip eggs, monitor clothes lines for rain and control bath water temperature. Milroy, writing in *Studies in Design Education Craft & Technology* (Volume 19, No. 3) has written:

"In a project on 'Shops', one predictable focus of interest might be the packaging of goods. Another focus of interest could be advertising and the promotion of products. During the topic, some children may elect to design and make carrier bags and cartons for products of their choice. Other children may decide to design and make promotional packaging and wrapping material, adverts or display 'gimmicks'. In this case, the teacher would be prepared for these and similar choices as a result of her/his forecast."

In the same issue Bosanko describes work he has undertaken in his school at Shirley Heath. He writes:

"One group was working on a project on Transport which, as a spin-off, considered cars as transport and as performance vehicles. I involved myself early on:

"O.K. These cars use petrol, but I wonder if it is possible for you to build

a vehicle which will travel more than one metre under its own power. You can't shove it or roll it down a slope! You must let it go from a standing start."

"Much pencil sucking goes on for about half an hour. Snail diagrams appear on scraps of paper. An argument about a power unit occurs. Other children are drawn in. There are two schools of thought. One favours elastic bands and the other favours electric motors. More pencil sucking, more plans, more arguments. Another split is occurring. Someone wants to use jet power, and they think a balloon will do. Eventually there are five distinct design teams discussing, exchanging ideas in a sort of mutual guarded secrecy because they want to have the winning design."

The designs are shown to me and with one or two suggestions they have my blessing to proceed. After weeks of trial, re-design, improvement, wonderful use of language both spoken and written, mathematical calculations and measurement, interaction within a group, modifications, trials of theories based on scientific ideas and knowledge, we had a variety of vehicles."

Encouraged by such initiatives, major work is now in hand to ensure that all primary schools can participate effectively. Recently a Design Council working party issued a report on *Design and Primary Education* with a range of recommendations to help teachers and local education authorities to plan the curriculum, generate resources and devise teaching strategies to promote design in the primary schools. Among the recommendations is the insistence that designing and making should be part of the training of all primary teachers:

"Professional courses must be devised which allow student teachers not specialising in [design studies] to understand the contribution of design-related activities to the development of the young child, and to acquire sufficient practical and organisational competence to handle design-related activities including those stemming from art, craft, science and technology in the primary classroom. Pressures to increase subject specialisation should not inhibit this."

Yet another Design Council initiative is *The Big Paper*, a timely publication of design-related material for use in primary schools. Elsewhere, a development team at Bromley is working on the *Design Dimension Project* with particular emphasis on the primary years and has already made considerable progress on curriculum development. The large new government-funded project, entitled "Problem Solving in Primary Technology" headed by Peter Sellwood promises to make a further highly significant set of moves in all the areas indicated in the Design Council Report.

We are already many moons away from the mainstream secondary school CDT and the prospects are exciting. Perhaps the danger now is to become too high-powered, too highly resourced and so frightened of all but the most sophisticated, affluent and committed schools. CDT should be at the heart of the primary curriculum but will fail if it seeks to dominate it. Perhaps we should prefer the title "Designing and Making" to "Craft Design and Technology", aim for well-equipped classroom trolleys of tools and materials rather than specialized areas, and above all to realize that all teachers in all schools are, and must be, teachers of design and technology now.

Professor John Eggleston is a member of the APU Steering Group on Design and Technology and editor of *Studies in Design Education, Craft & Technology*.

more advanced work in design and realization.

Flight gives the student a launch pad of a different kind, though in concept the mission is given to reproduce the pupils' worksheets within the school. There are 11 stimulating topics on flight which should lead to exciting work being carried out. Good design practice will be encouraged. The final designs need not require the same degree of skill to be satisfying as in the previous book, but the results should encourage a healthy competition within the group. If the other 4 titles in the series, *Mechanisms and Linkages*, *Structures*, *Energy and Powered Vehicles*, prove as good, then it will be a useful series to have.

Ted Hensman



WEST GLAMORGAN INSTITUTE
OF HIGHER EDUCATION
ADVANCED DIPLOMA IN DESIGN
AND TECHNOLOGY

Applications are invited from qualified teachers for this University of Wales validated Diploma course offered as follows:

- one year full-time, commencing in September 1988.
- two years part-time/new flexi-mode (details on request)

The course offers opportunities for

- designing new foundation courses
- developing expertise for GCSE
- curriculum development through links with local industry
- developing and evaluating curricular packages
- investigating cross-curricular links
- retraining from other disciplines

Details and application forms from

The Principal, West Glamorgan Institute of Higher Education, Town-Hill Road, Swansea SA2 0UT (tel. (0792) 203482) or, for informal discussions, contact Tudor Davies on (0792) 469004 ext. 2268.

(2530)

THE CDT CATALOGUE

TECHNOLOGY SUPPLIES

YOUR MOST COMPLETE CDT SUPPLIER

Dependable expert personal service. Top discounts, leading brands, prompt delivery. Our catalogue is in schools, copies from

6 Stoke Court, Stoke on Tern, Market Drayton, Shropshire, TF9 2DY. Tel Hodnet (063084) 691

NEW BOOKS FROM HOLMES McDUGALL

GRAPHICAL COMMUNICATION ASSIGNMENTS

This is a novel and time saving aid for providing exercises and assignments in technical drawing. The Pressure-fax spiritmasters supplied give a "starter" view for each problem, and this can be printed on to an A3 drawing sheet in the appropriate position (indicated on each master).

The assignments have been graded into three levels of difficulty, and the flexibility of the course means that slower pupils can be working on reinforcement exercises while the more able tackle more challenging work.

Main features

- * 40 duplicating masters.
- * Practice offered in cross-sectioning, finding true lengths and free-hand sketching.
- * Subjects, worked in first and third angle projections, include brackets, bearings and mechanical assemblies.
- * Geometrical themes like conic sections, prisms, tangency and loci are also featured.
- * Detailed solutions to the exercises are given as teachers' notes, which include a comprehensive planning guide relating general topics and themes to specific questions.

Available early '88

Please send me a copy of Graphical Communication Assignments on approval, £19.95.

Name _____

School _____

Address _____

Date _____

Return this coupon (no stamp required) to
Holmes McDougall, FREEPOST,
137-141 Leith Walk, Edinburgh EH6 6JL.

EXTRA

ALLEN & UNWIN

Design History
A Students' Handbook
Edited by HAZEL CONWAY

October 1987 221pp
0 04 370173 1 HB £15.00
0 04 370174 1 PB £7.95

British Higher Education
Edited by TONY BECHER

August 1987 288pp
0 04 370170 1 HB £25.00

Do Teachers Care About Truth?
E.P. BRANDON

May 1987 112pp
0 04 370174 4 HB £15.00
0 04 370175 1 PB £7.95

The Behaviourist in the Classroom

Edited by KEVIN WHELDALL

February 1987 248pp
0 04 370177 1 HB £20.00
0 04 370178 1 PB £7.95

Teaching Art to Young Children 4-9

ROB BARNES

February 1987 208pp
0 04 370179 1 HB £20.00
0 04 370180 1 PB £7.95

Allen & Unwin is the academic imprint of
Hemel Hempstead, Herts HP2 4TE

DRESSMAKING MADE EASY

TRYLON, SEE THERU' PATTERN
Unique durable tinted transparent
plastic pattern, tacks for fit with extra
pieces. See fabric easily for good
alignment.

Classic, up to the minute pencil skirt,
with optional features.

BACK OARS
ANOKED WELT POCKETS
BACK VENT

ABOVE KNEE
LENGTH ALSO GIVEN

Patent No. 1527123 in sizes 10-24
Make cheque/P.O. for £2.25 plus 50p
p&p payable to

POLYPATT DESIGNS,
188 Church Lane, Birstall,
Bedley, W. Yorks.

Tel. (0924) 476943.
Allow 28 days for delivery.

NEW - "Approaches to Primary Science
& Technology" (guide to forming a
school policy)

"Primary Technology (1) A
Problem Solving Approach (2) The
Challenge"

(CDT projects in the classroom)
"From Small Beginnings"
(a rural schools consortium)

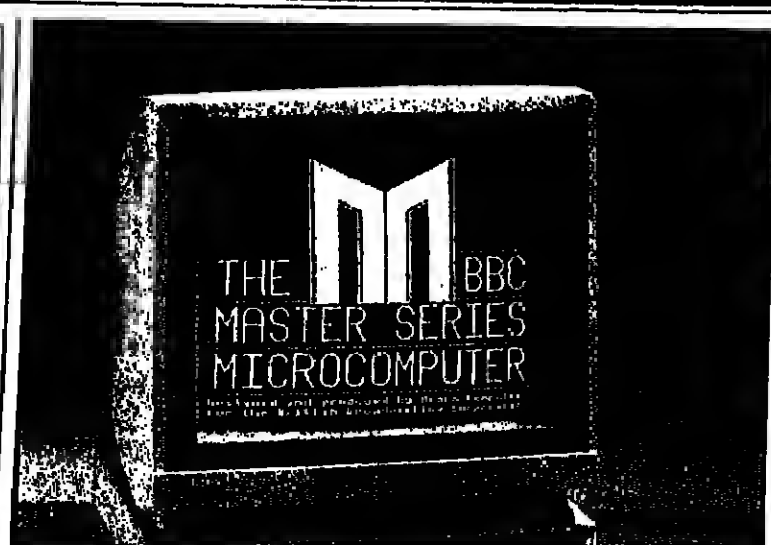
£20 each from
KETV, Barton Road,
Dover CT16 2ND
Telephone 0304-202827
for full catalogue.

"50 YEARS A LETTERING ARTIST"

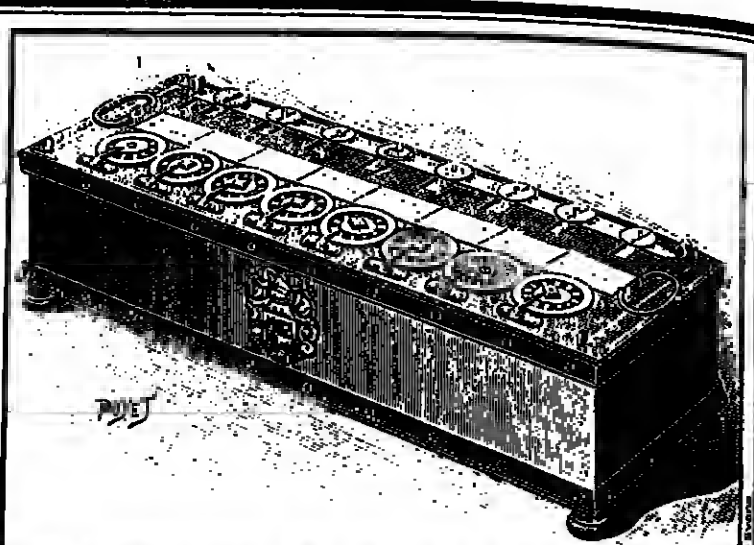
By John Wheeler (Illustrated)
for Graphic Design and Commercial Art
Students in Schools of Art.

Price £2.95 (plus postage £2)
Display in Art Shop for Students materials

Can be by Phone (0234) 588026 or by letter.
Sale or return: John Wheeler, 37, Lane Court,
55, Bath Road, Reading, Berks, RG3 2BJ.



A milestone in our professional careers: the BBC microcomputer



The 17th-century version - Pascal's calculating machine

The impact of computers Have you got IT?

RAY TOLLEY

Perhaps a good test of a teacher's approach to CDT is whether that teacher can take information technology on board. An attitude which combines a nervous rejection of the new-fangled machine and a sneaking feeling that perhaps the Luddites were right after all indicates that the teacher probably hasn't yet grasped the principles of CDT.

In the heady days of the late Seventies, when teachers of "technical studies" were exploring the meaning of CDT, many could see that CDT would have to include some reference to monitoring and control. A few colleagues began doing things with "Accom atoms" and "Commodore pets". The quaint programs, which invariably crashed or took ages to load, were not really comparable in the beauty and precision I could find in my workshops. Printouts were crude, the flickering incandescence of the strange block-graphics, the enigmatic expletives that suddenly exhibited themselves were not really the sort of things I wanted to be seen to be associated with.

For me, and many others, the birth of the BBC micro-computer was a milestone in our professional careers coincident with the trends of CDT. The ability to program in colour, to use various screen modes, to have facilities for control and word-processing all in one machine was almost beyond belief. Early forays into "bits" and "nibbles" were interesting, but no-one seemed to want to donate the thousands of pounds necessary to establish the sort of control-technology courses I wanted to run.

The old paradox of curriculum development raised its Scrooge-like head: my department couldn't have a computer until I could prove its worth. I couldn't prove its worth until I had a computer! This is where many teachers are forced to give up unless they can find a supportive advisor or inspector.

Convinced that my career development would hinge on whether or not I was "computerate", I obtained my own "Beet" and started burning the midnight oil. Step by step over the months and years, I added printers, a better monitor, dozens of tapes, disc-drives, modems, extension boards and chips galore. As a HoD the Beet

immediately improved my work output. Set lists, exam results, rank ordering were instantly available and easily updated. Similarly, it was not long before we were sending out the students' school reports in perfect type-written format. At last the craftsman's sense of quality, precision, layout, impact and "fitness-for-purpose" were beginning to flow from the computer. The most impressive impact was in the area of document writing. As a HoD one is required to produce reports galore, particularly in an area as rapidly developing as CDT was in the early Eighties. It soon became apparent how fundamental word-processing is in the creation and development of both the thinking and writing process. It became a form of competition to see how soon I could get a neatly printed report onto my headmaster's desk. The result would often be there in hours rather than days. Similarly, draft documents could be produced, discussed, revised and reconsidered within the delays in waiting for "the office" to produce the goods.

Teachers of CDT are in a very strong position to encourage students, however young, to question the appropriateness of the computer as a tool used in the solution of a particular problem. The argument must be that the student wishes to use the computer efficiently, should not be necessary for colleagues to spend dozens of hours understanding how a package works in order to explain to students how it can save them a few minutes in working out a set of simple calculations.

Spreadsheets
The Spreadsheet is perhaps the most undervalued of the generic (or "content free") software packages available to students. Children always seem

to enjoy presenting charts of results and the spreadsheet is certainly a quick way of organizing the presentation of such information. Data can be corrected, sorted, re-formatted, updated, re-calculated etc, and then printed out. One basic principle which can be encouraged at an earlier stage is the "What if...?" type of question. Using a prepared spreadsheet, students can quickly explore, for instance, fuel consumption figures, lens formulae or material costs.

Databases
For a definition, one might suggest that "A database is a system of organizing information so that a logical question presented to it can generate an appropriate output of information". How the information is organized, encoded and entered is relevant to how "logical" any interrogation of that database might be. In a subject as wide as CDT, databases are the obvious information tool for both staff and students alike.

Electronic mail
Electronic mail is generally under-used in CDT, which is a pity. Until a more imaginative use is made of the vast amount of information available to teachers of CDT, we will not become recognized as having a broad view of education. Some interesting work has been done where primary schools liaise with their secondary counterparts, using electronic mail in the design and problem-solving areas.

Wordprocessing
Wordprocessing should be a natural tool for all students and teachers of CDT. In word-processing, the red pen of "teacher-vandalism" is almost non-existent, particularly if using a Rom-based Spellchecker. It is no great tragedy to re-load a file, move a paragraph, insert an introduction, correct a few spelling mistakes or highlight a sub-title. The work has been

re-done, probably with improved understanding of the errors made, and printed out in draft or daisywheel format.

Control
Computer-aided control is perhaps the most enigmatic aspect of computing. The Beet is quite capable of taking on most control applications from the smallest photo-electric smoke detector to the largest of Computer Numerical Controlled (CNC) machinery. Some manufacturers have taken serious note of the needs of education in this area. Great fun can be had, even in primary schools, designing the logic of quite sophisticated burglar-alarm systems if the teaching method is appropriate.

The more human aspects of monitoring and control, health and safety or automation and unemployment should be part of any examination course.

Graphics
The BBC Micro hit the headlines when it came out partly because of its comparatively powerful graphics capability, and yet, for teachers of CDT, our needs have not really been met by the software writers. Graphical output hardware is very expensive and often an under-used investment. Plotters can produce attractive work and colour dot-matrix printers are impressive until one has to pay for replacement colour ribbons.

"Archimedes", the first of the new generation of 32-bit "RISC machines", looks likely to be the answer, once the appropriate software has been written. If the new CAD software can take databases for BS1 308, tensile strengths, building regulations or wind-tunnel data on board we will begin to get the sort of design performance and simulation we require.

Conclusion
The potential impact of IT in schools needs to be further exploited. The quality of software in all subject areas has steadily improved. Some of our students have now been following IT courses for the last five years. Students of CDT are not excluded from this trend. Any teacher who avoids using IT is sticking his or her head in the sand - are you?

Ray Tolley is President of EIDCT. He is presently working as Peripatetic Head of IT in Croydon.

A headteacher on the role of CDT A rich service

TOM SHEPHERD

needed to equip workshops, the cost of materials, the replacement of tools all place a strain on the resources of schools which are also facing increasing demands from all departments to re-equip in light of GCSE and the development of the use of new technology as an integral part of the normal school activities.

The loud voices demanding that CDT should be provided for all, and the financial implications of responding are two of the many pressures which arrive on the head's desk. The questions asked are, what special contribution to the quality of the child's experience in the school is offered by CDT which justifies its high unit costs? What extra does the pupil get for the extra cost?

The answer to these questions lies in the basic fact that CDT is not a knowledge-based subject, but a timetable space in which pupils have the

opportunity to recognize a concrete problem, to consider a range of solutions and to construct their selected solution using a variety of materials and a wide range of techniques.

The CDT workshop is the meeting point of many of the academic experiences pupils gain in other areas of the school. Mathematics, art and design, physics, information technology and many other subjects are drawn upon by the pupils in the problem-solving activities of CDT. The workshop activities can give reality to classroom lessons, where space, materials, equipment and resources are not normally found.

The process of designing, making, evaluating and using the finished artefact is one of the few opportunities pupils have to a school of seeing a task through from idea to realization. The need to make choices is inherent in the CDT workshop and more significantly

the necessity to face the physical consequences of those choices. No time-limited event in a school allows the pupils to see the relationship between the decisions they make and the results of those decisions more clearly, regularly and frequently than CDT.

The contribution made by CDT is fourfold: it enhances many of the activities pupils do elsewhere in the school; it provides the space for the young people to convert their own ideas into physical forms; it uses the lessons learnt elsewhere and allows pupils to appreciate their own strengths of intellect, imagination and application.

The cost of this enabling vehicle can be and should be looked at as a whole-school and not a subject cost. CDT services, the school and the charge for such a rich service can be apportioned to the "gaining" departments in the school. How fortunate it is that the use of approval for CDT is high both within the school and in the community. Had it not been so, the fiscal considerations would have washed away the CDT experience in many a school by now.

Tom Shepherd is head of Sprouton High School, Norwich, and former president of the Educational Institute of Design, Craft and Technology.

EXTRA

Why work alone on projects?

Good company

DUNCAN HARRIS

The main reason for individual projects in schools seems to be the public examination system. The assessment tall wagging the learning dog? I was disappointed to see no mention of working together in the GCSE CDT criteria. The bulk of the criteria relate to the cognitive and psychomotor domains and, to a lesser extent, the affective domain. The assumption is that Bloom and his co-workers got the definitive statement about learning 30 years ago. Inter-personal skills seem to have been given little emphasis in the Bloom model. Assessment is a means of collecting data and information in order to report on the performance of

an individual. The GCSE developments lead one to expect some form of profile rather than global marks or grades, otherwise how will it be criterion-referenced assessment? Vocational qualifications are also moving towards a profile format and some already incorporate working with others.

While assessing group projects is not as easy as assessing individuals, it is feasible. The assessment may incorporate observation, analysis of reports (group and individual), group oral presentations followed by questioning. The time consumed is worthwhile if it enhances the learning. I would submit that current practice inhibits a crucial element of learning in design and realization. It is ironic that the crucial element is central to human

existence: working with other human beings! Team work is the essence of technological design. In a school context, team work not only promotes the development of interpersonal skills, it also provides a more thorough realization of the learning of design. The learning of interpersonal skills is crucial when teams are working together to generate the realization of a design, which in turn evolved from a brief. For group projects those interpersonal skills are as important as the technological and design aspects. Learners working in groups need to share their difficulties and the problems of working together, not only within their small group but also across groups. A small amount of time set aside for such learning could provide enormous benefits to working in groups.

Creative technological design depends on people. Let us encourage youngsters to learn in the way that the real world operates: group projects

Duncan Harris is Professor of Education in the Faculty of Education and Design, Brunel University.

Eye-catchers

CDT for GCSE. By Peter Toft.
Helsman £4.95. 0 435 75990 6

GCSE Craft, Design and Technology.
By Richard Kimbell et al.

Thomas/Hutchinson £4.25 0 09 172461 9

Craft, Design and Technology. By S. Dunn

Bell & Hyman £4.50

Central to the change of direction in craft education is the word "Design". Craft, Design and Technology is now the accepted title for an important area of the curriculum. Originally the prime movers for this were the DES, which makes the 5-16 Curriculum document disappointing reading as it only designates Technology in the core. Will our subject disappear under the Science umbrella?

CDT for GCSE makes design and designing the central theme and all aspects of the process are effectively covered. Students will find this an easy book to use, there is an excellent index, the page headings are distinctive and page layouts eye-catching. Effective use of cartoons to illustrate the text are complemented with clear photographs and line drawings.

A good balance is achieved between illustrations and text, though the latter works me a little. I feel the author talks down to the reader by the excessive use of the second person. For the traditional craft teacher having to make the change to CDT, this book presents Design and Technology in a clear way while leaving the teacher to provide the essential skill and technique education.

Craft, Design and Technology is a comprehensive textbook for GCSE students. The four sections of the book cover the common core, communication, realization and technology by effective use of colour, a readable text, varied examples of line illustration and photographs. It is perhaps unfortunate that some of these are too dark to show details clearly.

I cannot comment on the final format of Craft, Design and Technology by S. Dunn as I received the manuscript only but it will be excellent if the author's earlier book *An Introduction to CDT* is any guide. That is a model of clear presentation, good colour work and helpful features like the thumb index.

However, I have seen few books as comprehensive as this, it is a complete text-book where every aspect of the subject is covered in depth. The first section concerned with safety - a very important priority - is followed by advice on project-work and a full study of designing and problem solving.

Successive chapters deal with the graphic skills needed to support projects and the materials and construction techniques required for successful realization. The last third of the book deals with the necessary technology including structures, mechanisms, energy and electronics. There are more than 400 ideas for projects listed - enough to help any harassed teacher - but then this is only one aspect of a book which ought to be in every CDT room.

John Headman

Absorbing Mechanics

LEGO® TECHNIC Sets are an early introduction to 'how things work'.

Collaborating in small groups children learn the foundations of mechanics - the lever, the pulley, gearing, kinetic energy, energy transmission and so on.

The sets have been designed to develop logical thinking and problem solving.

The use of material which is easy to handle enables the complexities of the world around the child to be understood.

TECHNIC 1 has 179 pieces and 20 detailed work cards to cover basic mechanical knowledge.

TECHNIC 2 includes a 4.5-volt electric motor and elaborates on transmission, gearing and engines.

Both sets are supplied in a robust, easy-to-check storage container so that you can be sure of getting all the pieces back.

All models are easily assembled in about 20 minutes so a period gives ample time.

Please send me further details of LEGO TECHNIC Sets 1 or 2 with a free work card, sample pieces and an extract from the Teacher's Guide. SET 1 □ SET 2 □ (Please tick)

Name _____

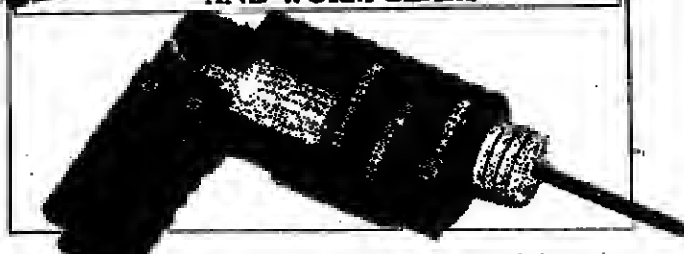
Address _____

Send to: Education Department, LEGO UK Limited, Wrexham, Chwyd LL13 7TQ

Offer applies to UK & E. of Ireland only.



NEW! LEGO® TECHNIC 2 HAS A 4.5-VOLT ELECTRIC MOTOR AND WORM GEARS



See for yourself the exciting possibilities that LEGO® TECHNIC Sets offer. Use the coupon now for a free work card with sample pieces and an extract from our teacher's instruction manual. LEGO® TECHNIC sets are obtainable only through specialised educational suppliers.

100% LEGO Group. The LEGO logo is a registered trademark.

TECHNIC SETS 1 AND 2 Age 7-13

Education Department, LEGO UK Limited, Wrexham, Chwyd LL13 7TQ

EXTRA

Residential INSET week in Northumbria

Themes and variations

PAUL BURTON

The sermon over, the teachers set up a small exhibition of some of the work being undertaken in their schools. This was discussed and from this emerged another main issue, one with which a number of CDT teachers are still not fully happy and have not addressed, that of putting problems into context.

Recently an HMI visited a CDT workshop where he encountered a group of boys and girls actively engaged in design work. He asked one young boy what he was designing. "A portable what?" asked the puzzled HMI. "Dunno," said the boy, "I've only drawn the handle so far." Further inquiry would have revealed that this design brief was probably based on the TCP method - Teacher Centred Problems, which I touched upon in an article in *The TES* in 1984.

But how do CDT teachers find, create and produce appropriate contexts and situations in which they can assist pupils in identifying design problems rather than giving solutions which are looking for problems? Alongside this a number of my more senior CDT teachers have expressed great concern that although they wish to, and are making great strides in developing new teaching methods, they would like some curriculum support materials to help in introducing integrated technology, graphics and problem-solving approaches in a context.

The group of teachers were then given a context exercise in which they were presented with a problem-solving

situation for pupils about air-crash survival. Their groups they had to discuss ways in which they would present this scenario. The majority said they would start off with discussing the problem as a class exercise and only one group came up with the SDP approach: Stimulus - Discussion - Problem. The SDP group introduction would involve a combination of prepared cassette-recordings simulating a distress call, also videos on airports and aircraft, possibly alongside a computerized log sheet, flight recorder, passenger list and part of the room decorated with commercial posters on the history of flight, holidays and so on.

In the afternoon my two colleagues from BST introduced their version of a brain-storming technique, focusing on the theme of entertainment. The teachers were asked on an individual basis to produce a "game" to amuse a young child. The teachers were given a specific time limit (by Wednesday lunch), were allowed limited resources and were told that their solution should involve the use of one or more electro-mechanical devices, eg small electric motor, pulleys, switches, levers, linkages etc. Two main considerations and constraints were that it should be a designed working "product" and finished as a complete package with the main emphasis on the quality of finish and aesthetics. I applied the same principles to this

course as to work undertaken when I was head of department in that I provided a limited, standardized size and range of resistant materials, fastenings, consumables and small equipment drills etc, based on an even numbers system. In this way the design experience had a built-in self-controlling mechanism, everybody knew what was available. In a CDT workshop it is an important consideration to ensure that pupils not only explore a range of materials, but realize that time, costs and constraints are part of "real life" design.

Tuesday

As part of the week's course, guest lecturers were invited to suggest alternative ideas, skills and techniques. The first guest lecturer was a freelance industrial designer from Newcastle Polytechnic who provided a wealth of material ranging from students' work to actual commissions from leading companies.

The afternoon and evening activities involved demonstrations and practical work covering such aspects of rendering with pens, markers, inexpensive coloured chalk to background and special effects.

Wednesday

It was now time to embark upon the central purpose of this course, which was to develop curriculum development materials using thematic approaches. For this the teachers were divided into four working groups, but kept together for a brainstorming session. The brainstorming technique

involves the use of flip charts and someone to record information. Initially, spontaneous ideas are recorded by each group no matter how irrelevant to the subject. These responses are categorized into sets of ideas, priorities are decided upon by each group and on an individual basis. Finally, all first choices are put on a slip of paper and each group randomly selects the project theme. Again the brainstorming technique was applied to reduce each theme to a more specific aspect. To constrain the groups further, we asked them to focus on those elements fundamental to GCSE and in the HMI documents *Better Schools* and *The Curriculum from 5-16*. These elements are progression, continuity, breadth, balance, differentiation, and relevance. Each group in the context of a specific age range with a specific emphasis. As examples, Group A, whose theme was the Environment for 10-11-year olds, produced "It works! A programme for success", a project with which children should not fail to achieve good results which will build confidence. Group C, subject was Fantasy, (age range 12 plus) and they emphasized aesthetics in product-design, focusing on accuracy, "craftsmanship" and working in resistant materials.

The prescribed outcome for all four groups was not only a practical and product, but also curriculum development materials in the form of teachers' and pupils' notes illustrating progression and extension of the project, design context, a pupils' design brief, resources, information and assignment sheets, all to be presented for an exhibition on the Friday afternoon.

Thursday/Friday

Perspiration and inspiration were the keynote of the last days of the course. All the groups had responded to the activities in a keen and professional way. Each group had refined their theme down to manageable elements. These involved experiences in control-technology for bridges as part of the theme on water, elementary electronics in "Highlight a journey down a street" and as part of the Fantasy theme. The final display on Friday afternoon was really tremendous. However, the major spin-off is a booklet of five integrated design and technology projects which will be distributed in all CDT teachers in Northumbria.

During the course of the week these teachers tackled a number of issues pertinent to teaching contemporary CDT. The material they produced is only at the development stage and although it could be argued that it is somewhat prescriptive in content, it will give encouragement and support to those teachers still trying to come to grips with CDT.

A copy of the booklet Curriculum Development Material - Integrated Design and Technology may be obtained on receipt of an A4 s.a.e. and a cheque or postal order for £2.50, payable to Northumbria County Council, from Morpeth Teacher's Centre, 94 Newgate Street, Morpeth, Northumberland NE61 1BU.

Paul Burton is General Adviser (Design and Technology), Northumbria.

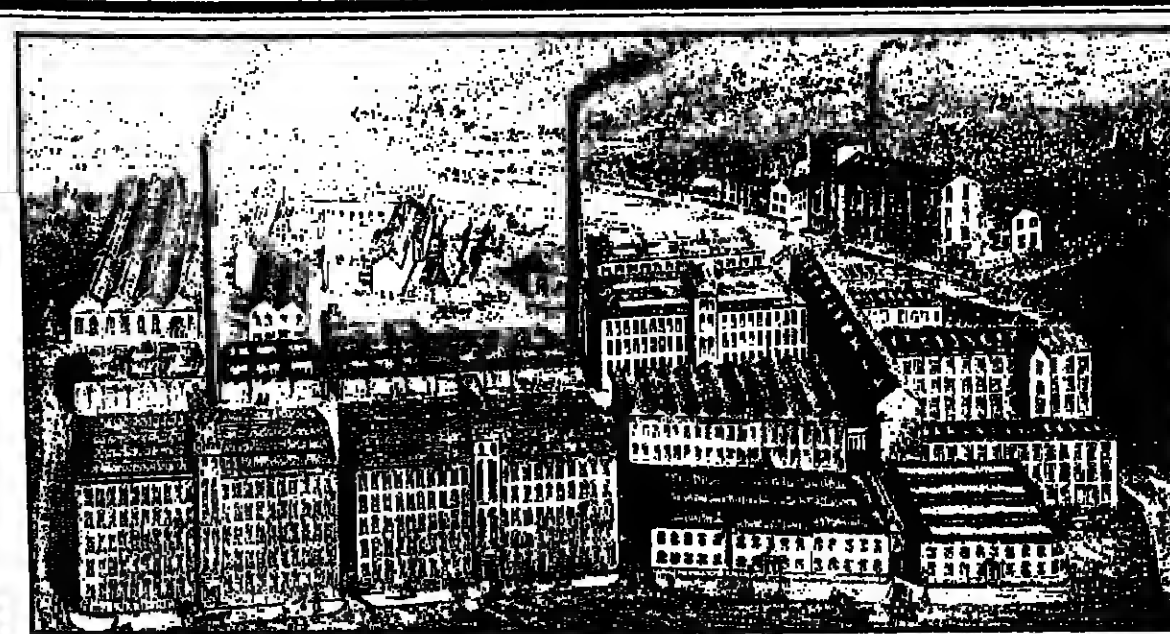
the Thames in the London Borough of Richmond. Over the past academic year, a group of teachers, disparate in their training and teaching to date, were brought together after nomination and rigorous selection, to develop new approaches to technology.

Chronic shortfall in the supply of newly-qualified teachers for design & technology, exacerbated by a continual seepage of those whose talents are attractive to industry, is a constraint upon the development of technology as a curriculum subject. Simply writing technology, or CDT, into the core curriculum will not in itself deliver the goods. Local and institutional providers can do little more than help them to catch up on the relentless advance of technological concepts. Release and secondment for these teachers puts strain on colleagues. None of this adds to the quantity of teaching resource available. The Richmond group, being drawn largely from other subject areas, will add to their schools' ability to deliver design and technological education. Specific aims of the initiative are twofold, namely: To bring about technological awareness across the curriculum by appropriate themes and approaches to other curriculum areas, and To prepare teachers from curriculum

EXTRA



Reinforcing the modern applications of CDT: a computer controlled wheelchair and model flat made by a group of 12-year-old pupils



CDT is still plagued by negative and outdated images of industry and the world of work. Above: textile factory in Paisley, circa 1880

Improving the image of CDT

Audience appeal

STEWART DUNN

Very often, negative images of industry and the world of work are presented daily through the media, by acquaintances and other teachers. Government money and glossy advertising campaigns help our cause, but plenty more needs to be done. This article aims to give some practical advice on ways in which we can help improve the image of Craft, Design and Technology. One of the first opportunities to seize is that of publicizing good practice to a wider audience. This could be done at national, regional and local level, by putting pressure on television companies to have more "problem solving" programmes which involve schools, exhibiting in town centres and at country shows, singing events that attract the media, having a lively county or regional CDT magazine, holding inter-school competitions, using open days to advantage and displaying or demonstrating good work to children in school assemblies.

The changing nature of CDT means there is a need to relate more directly to boys' and (especially) girls', interests; it being important that good examples are disseminated widely. Our presentation must reflect our "audience". In the modern world new and different skills are required: fewer people are needed in traditional industries, but more in the growth areas such as information and service industries. Students leaving school must be able to solve problems of a technological nature, be adaptable, imaginative and understand the needs of a modern technological world. Bearing this in

mind, teachers may want to question the way they teach and the themes and projects that are used. It would be a great help if each county or region had a person responsible for promotional work which could include: arranging local and national travelling exhibitions, being responsible for a county or regional CDT magazine or newsletter in which coming events, photographs and articles of good practice sent in by teachers are publicized (perhaps a small sum for each contribution could be offered as an inducement), informing people where special equipment can be obtained such as large display boards, ready mounted headings, suitable venues, help with finding sponsorship, loaning portable secure display cabinets (rare things indeed, but essential for displays in some places). Often CDT advisers take on these responsibilities, but teachers are reluctant to ask them for help because they know how busy they are.

Many CDT workshops have changed little over the last 20 years or so and are still organized rather like old-fashioned corner shops in which everything is obtained via the teacher. Problem-solving work is difficult to teach using this labour-intensive structure. Pupils need to be more independent and be able to help themselves to materials, with the teacher's permission if needed, and should have attractive

display areas with stimulating examples. Large DIY stores have improved their visual image and appeal by employing professional promotion managers and outside consultants. The result is usually a pleasant, clean environment with self-service information centres, video demonstrations etc. The products on sale are stored conveniently and often have "how to use it" instructions. Some of these systems could very easily be adopted in the classroom.

I am sure CDT teachers would welcome more stimulating display materials of well-designed products. Schools are not really geared up to produce large posters which, when displayed properly, can have a marked effect on the image portrayed. The centre pages of the magazine *Designing* by the Design Council are widely used but more could be done by other organizations. Students sometimes get frustrated with the equipment supplied because it is inadequate for the open-ended problem-solving activities now expected. Versatile and more "user friendly" teaching equipment would be very welcome in some areas of CDT teaching. The instructions should also be visually exciting.

I am at present completing a new open-ended electronics/mechanics problem-solving kit which will hopefully help in this direction. In school some CDT teachers could use more opportunities to reinforce the relevance of CDT to the "real world" and to the everyday life of both pupils and staff. People interested in

helping improve the image of CDT may like to join organizations such as DESTECH, whose aim it is to "promote craftsmanship, design and technology through education". It is organized nationally with regional organizers who run local events, working parties etc. in the region. As the Shropshire and Staffordshire organizer last year I organized various events to which prominent national speakers were invited to address the local CDT fraternity. A working party was also set up to look into ways of "Improving the CDT Environment/Architecture in Schools".

Below is an interim summary-report based on the findings of the committee after the first few meetings. The final illustrated version of the report will be displayed on the DESTECH stand at the CDT Exhibition, National Exhibition Centre in Birmingham this October.

Improving the CDT Environment/Architecture
"Better use should be made of displays in the entrance to CDT areas: on workshop walls, using window space, corridors and school open spaces. The displays can be produced either by pupils, staff or loaned by industry or the county. It is important that effective ways of presenting pupils' work is used, such as cloth backdrops and thematic props such as plants. Secure display cabinets are also needed for valuable pieces of work. Thoughtful use of lighting can transform some display areas."

"Large flat workshop surfaces are now often required when displaying computer control work, etc. The storage of pupils' work needs to be considered properly otherwise it can lead to breakages and theft of parts."

Continued on page 54

The dulcet tones of Northumbrian pipes cut through the noisy atmosphere of the lounge bar at the Tankerville Arms Hotel. Tranquil melodies suggested idyllic scenes of grass and sandstone ridges, undulating hills, burns and bleak rocky crags. A group of teachers ceased their conversation about electronics, problem-solving and technology and watched one of their more senior CDT colleagues create visions and tunes from his pipes - a craftsman in more than one sense.

For 17 teachers of CDT and Science it was the end of a week's residential school-based INSET course which had been held at Wooler Middle School in the heart of Northumberland countryside. The week was the culmination of three previous residential one-week courses over the last year at the British School of Technology, Nottingham, and as their adviser I wanted to provide a course in a context familiar to them - a CDT workshop, preferably in a school located far enough away from domestic distractions, but in an agreeable setting.

The programme had been devised and organized to address a number of issues and concerns relating to the teaching of contemporary CDT. I have, like many of my colleagues, the opportunity and privilege of visiting a large number of schools, training establishments and occasionally other i.e.s and in talking with CDT teachers it has become apparent that some of the concerns I had identified are pertinent not only to Northumberland.

This article gives a brief account of the week's activities, highlighting particular concerns and how these were addressed.

Monday
Let us begin with the Commandment - Thou shalt relinquish the unadulterated use of GCSE for the week. No, not the examination, but Glue-guns Can Solve Everything. Since introducing these into the county in combination with David Jinks' approach to design and technology it has been like unlocking Pandora's box and the resources store cupboard all at once.

A number of CDT teachers have wholeheartedly embraced these new techniques, but like any innovation, they can be taken to extremes. Sadly, some teachers have the "If it moves glue-gun it" strategy, or "If it won't move, put it on a chassis made of cardboard triangles and strips of wood and plastic wheels. When I see 13-plus foundation work or, in occasional cases, 16-plus design and technology examination work being presented in a "primary technology approach" with cardboard, bits of wooden dowelling, string and Coke tins along with the indiscriminate use of the ubiquitous glue-gun it makes me shudder.

I am a great advocate of the Jinks approach and his underlying philosophy, but the balance now needs to be redressed. The use of resistant materials, good "craftsmanship" through an integrated approach to technology was to be the focal point of the week's course.

An attempt to overcome the shortfall in teachers of technology Pilot light

BERNARD HILL

The late Sixties brought with them the Schools Council Pilot Project in Applied Science and Technology under the leadership of Geoffrey Harrison, almost concurrently with John Eggleston's Education through the use of Materials Project. The latter seemed directly aimed at teachers of what was then Handicraft, while the former, in

the absence of significant interest from science teachers, also landed in their laps, almost as the cuckoo in the nest. The intervening years have seen developments in both initiatives which, whatever the intentions of their protagonists, have settled into subject-specific curriculum areas. First GCE and then CSE syllabuses have tended to confirm these as discrete areas in a

pupil's education. But not so under GCSE subject criteria. Technology is noted by its absence from among the 20 subjects for which there are specific GCSE criteria. True, several syllabuses have been prepared and given preliminary approval by the Examination Groups, while at least one other has been prepared with an eye on the criteria for science.

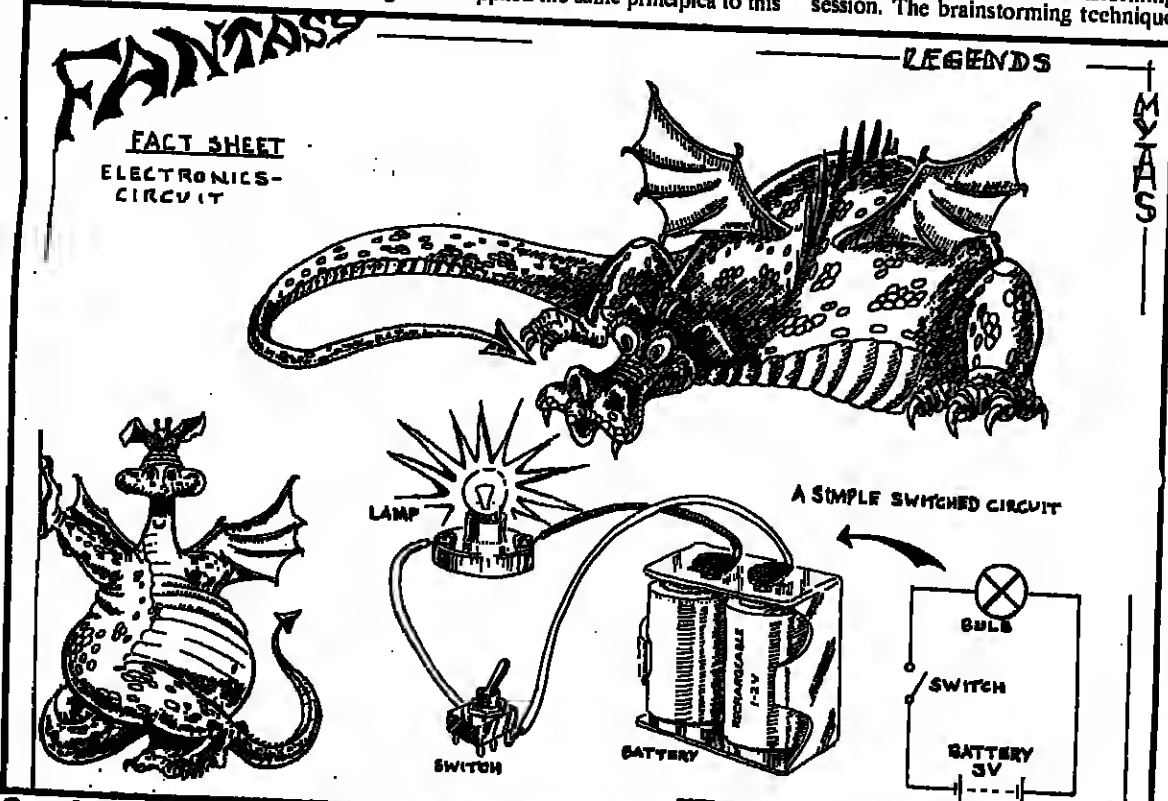
This continual quest for specific subject identity for technology may not be the best or only answer to the development of technological awareness and capability in pupils. The vast majority of primary schools have little difficulty in attaining trans-curricular education. Language, number, history, world affairs - people, politics, resources, etc become integrated coverly in the teaching and in children's assignments. Secondary school faculty adding a further hierarchical layer to a group of virtually watertight subject areas each with their set syllabus.

Have schools really moved on in the past decade from the picture conjured by the 1979 HMI Report *Aspects of Secondary Education in England*, which can be found statements such as: "... although a great deal of information was spent on algebraic manipulation... only a little of this time was spent using the techniques to

deduce information in some other area of knowledge such as science or craft...". Or "Many science teachers declared that pupils were unable to cope with mathematical demands of the subject. However, there was little evidence to suggest that this view had led to communication between members of departments or to the development of common policies." (paras 7.4.15 and 8.12.17 respectively?)

A decade prior to the HMI survey, there was light on the horizon. King's Lynn's Cray Valley aims as outlined in his 1969 article "In search of an alternative road" [*Attitudes in Design Education*, Baynes (Ed)] were to break down artificial barriers between subjects so that there was more use and illumination of one subject by another, more interpenetration, more cross-fertilisation.

Can one hope to attain this kind of aim against the inertia of a teacher supply system which is producing the majority of its new CDT and technology teachers from a subject-degree plus PGCE basis, and then throw them into a separate subject-dominated curriculum? A glimmer of light, pilot light one could say, derives its prime energy from Department of Trade and Industry and Manpower Services Commission funding. Is about



One of the worksheets for the 'Fantasy' theme designed by teachers on the course

TRYLON

Suppliers of plastics for CDT. Free catalogue/project leaflets.
NEW A range of primary craft materials. Send for details:
TRYLON LTD, THRIFT STREET, WOLLASTON, NORTHANTS, NN9 7QJ. Tel: (0933) 864275

Oxford University Press

DESIGN AND REALIZATION

Adrian Marden

A Manual for GCSE Design & Realization

- A highly visual coursebook which examines the design process
- An ideal text for GCSE Design and Realization Courses
- Material for project work for Design and Technology students
- A large selection of examination questions and coursework briefs

196 pages 0-19-832732-3 £5.50 March 1987

PLEASE SEND ME AN INSPECTION COPY OF DESIGN AND REALIZATION (832732-3)

NAME _____
SCHOOL/COLLEGE _____
ADDRESS _____
POSTCODE _____

RETURN TO: OXFORD UNIVERSITY PRESS, EDUCATION DIVISION (MK 8094), FREEPOST, OXFORD OX2 6BR



Bernard Hill is INSET Co-ordinator at the Faculty of Education and Design, Brunel University, Uxbridge, Middlesex

SECONDARY SCHOOLS

ISLE OF MAN

BOARD OF EDUCATION

QUEEN ELIZABETH II

COMPREHENSIVE - 553 nm

ORAUATEACHER OF

SCIENCE

Required for January 1988

to teach Science

throughout the school and

to G.C.S.E. level. An ability

to teach O.C.S.E. and

Science is essential. An ability

to teach City and Guilds/

S.E.T. courses would be

an advantage.

Application forms and

further details can be

obtained from the

Headmaster, Queen Elizabeth II

High School, 11th Floor,

Men (Tel: 0624 543131) to

whom completed forms

should be returned by

Wednesday 14th October

1987. (190050) 134545

Somerset County Council

AN EQUAL OPPORTUNITIES EMPLOYER

Applications are invited for the following posts. Unless otherwise indicated application form and further details (see places) from the Head of the school.

SECONDARY EDUCATION

1 HEAD OF GEOGRAPHY

MAIN SCALE - ALLOWANCE B

2 MATHEMATICS MAIN SCALE

Suckley's Head School, Yeovil

[11-18 mixed comprehensive, nr 1143]

1 For January 1988 or as soon as possible thereafter.

A job application form will be sent to all applicants.

2 For January 1988, to teach pupils through the age and ability

range. This is a temporary appointment for two terms in the first

instance.

Apply by letter with full CV and the names and addresses of two

references in the first instance.

GEOGRAPHY MAIN SCALE

Chilham Trinity School, Brixdown

[11-18 mixed comprehensive, nr 943]

1 For January 1988, to teach across the age and ability range to

GCSE. A commitment to fieldwork is essential.

Apply by letter to the Head of the school with full CV and the names

and addresses of two referees. For further details please contact the

school 0278 456891.

Closing date 16th October.

FRENCH MAIN SCALE

Frampton School, Yeovil

[11-18 mixed comprehensive, nr 092]

1 For January 1988, to contribute to the teaching of French through-

out the school. Closing date 19th October.

OUTDOOR EDUCATION CENTRE

WARDEN DEPUTY HEAD GROUP 3

Greenwood Residential Outdoor Centre, Over Stowey, Bridgwater.

For January 1988. The centre operates for 24 weeks in the year and

the warden works in the country's other outdoor centres for the

remainder of the year.

Previous experience and possession of the mountain leadership

certificate will be an advantage. The successful applicant will be

responsible for the day-to-day running of the centre.

Application form and further details (see places) from the Staffing

(1) Section, Education Department, County Hall, Taunton,

Somerset, TA1 4DY. Closing date 19th October.

PRIMARY HEADSHIPS

1 HEAD GROUP 8

Somerset County Junior School, Yeovil. (nr 289)

For April 1988.

2 HEAD GROUP 3

Shepton Mallet County Infant School, Shepton Mallet. (nr 129)

For April 1988.

Applicants must have further details (see places) from the

Staffing (1) Section, Education Department, County Hall, Taunton,

Somerset, TA1 4DY. Closing date 25th October.

PRIMARY EDUCATION

RECEPTION TEACHER MAIN SCALE

Parkfield County Primary School, Taunton. (nr 250)

For January 1988 an infant trained teacher.

Closing date 19th October.

TEACHER MAIN SCALE

St George's RC Primary School, Taunton. (nr 242)

For January 1988, a committed and enthusiastic Catholic teacher for

the Junior Department to make a significant contribution to

mathematics in the school. Please indicate other curriculum

strengths and experience.

Interest in Computer Studies, Art and Display an advantage.

Closing date 23rd October.

TEACHER MAIN SCALE

Hayesdon First School, Frome. (nr 326)

For January 1988 to teach across of 6-7 year olds.

Closing date 21st October.

TEACHER MAIN SCALE

Westfield Infant School, Yeovil. (nr 237)

For January 1988. A particular interest in teaching games skills to

enthusiastic 7 year olds would be welcomed.

Closing date 19th October.

TEACHER MAIN SCALE

Marriott First School, Marlott. (nr 131)

For January 1988 for Reception class. This is a temporary appoint-

ment for two years to cover for the absence of the present post-

holder.

TEACHER MAIN SCALE

Weare CE VC First School, Axbridge. (nr 125)

For January 1989 for Reception infants in a well-resourced Area

School.

Apply by letter to the Head of this school with full CV and the names

and addresses of two referees as soon as possible. Further details

should be sent to all applicants (see places). Further details

Closing date 20th October.

OTHER APPOINTMENTS

1 ADVISORY TUTOR FOR HEARING IMPAIRED

CHILDREN MAIN SCALE - ALLOWANCE S

Bridgwater Area.

Required as soon as possible. Applications are invited from quali-

fied and suitably experienced Teachers at the level for the above

post.

Application form and further details (see places) from the Staffing

(1) Section, Education Department, County Hall, Taunton, Som-

erset, TA1 4DY.

Closing date 19th October.

2 TWO ADVISORY TEACHERS FOR HEARING

IMPAIRED CHILDREN MAIN SCALE

One in Bridgwater and one in Yeovil.

Required as soon as possible. Applications are invited from quali-

fied and suitably experienced Teachers at the level for the above

posts.

Application form and further details (see places) from the Staffing

(1) Section, Education Department, County Hall, Taunton, Som-

erset, TA1 4DY.

Closing date 19th October.

KINGSTON UPON THAMES

ROYAL BURGHLEY

KINGSTON UPON THAMES

TIFFIN SCHOOL

Queen Elizabeth II

COMPREHENSIVE - 553 nm

ORAUATEACHER OF

SCIENCE

Required for January 1988

to teach Science

throughout the school and

to G.C.S.E. level. An ability

to teach O.C.S.E. and

Science is essential. An ability

to teach City and Guilds/

S.E.T. courses would be

an advantage.

Application forms and

further details can be

obtained from the

Headmaster, Queen Elizabeth II

High School, 11th Floor,

Men (Tel: 0624 543131) to

whom completed forms

should be returned by

Wednesday 14th October

1987. (190050) 134545

KENT

THAMES VALLEY

NORTH WEST KENT AREA

THAMES VALLEY

Green Street Green Road,

Canterbury, Kent DA1 1JG

Mixed Comprehensive - 4830 on roll

WILTSHIRE

MALMESBURY SCHOOL

Corn Gables, Malmesbury

Wiltshire

Mixed Comprehensive - 4830 on roll

Headmaster: J.A. D'Arcy

Required in January or

temporary (12 term) teacher

of Biology and Chemistry

appointment of a Head of

Department. The teacher

appointed must be able to

teach to Advanced level.

Further details and ap-

plication forms can be

obtained by sending a

letter to the Headmaster,

Corn Gables, Malmesbury,

Wiltshire SN15 3DP.

Closing date October

18th.

Wiltshire is an equal

opportunities employer.

(1988) 134840

SEFTON

METROPOLITAN BOROUGH

OF SEFTON

EDUCATION COMMITTEE

SAVIO HIGH SCHOOL

Newtown Way, Sefton L30

SNA

Required as soon as possible

(main scale). Ability to assist

with Information Technology

an advantage.

Applicants should be auto-

matically considered. Ap-

plication forms and

further details may be

obtained on receipt of

a letter from the Head-

master of the school to whom com-

pleted forms should be re-

turned by 23rd October 1987.

This is an Equal Oppor-

tunities Employer.

Applying with full details

(1988) 134840

SHROPSHIRE

MAOLESLEY COURT

Court Street, Medley, Telford

Required for January 1988

a temporary full-time

teacher of Science for this

school. The successful candi-

date will be responsible for

the teaching of Science and

preparatory work for the

GCSE examination. The candi-

date should have a minimum

of 5 years' experience in the

teaching of Science. The candi-

date should be able to teach

to Advanced level. The candi-

date should be able to assist

with the preparation of the

school's Science Department.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive

site with excellent facilities.

The school is situated on an

attractive site with excellent

facilities. The school is

situated on an attractive</

UOBSRT

Wanted from 1st Novem-
ber a graduate to teach a full
time of Latin and Greek
at a Civilian school and to
teach in the evening at the
end of the term to cover for
himself.

Apply in writing with
c.v. and names and address
of two referees to the
Headmaster, Othman
School for Girls, 18124
104801

HERTFORDSHIRE
ST. MARGARET'S SCHOOL

Wanted in January on either
a permanent or temporary
basis, an enthusiastic teacher
of Latin, with a related subject.
The school has a strong Classics
department and requires some-
one who will teach up to A and
O levels.

Application forms and fur-
ther details from the Head-
master at the above address, or
telephone 01-550 18124
1213001

KING'S COLLEGE SCHOOL
Wimbledon, London SW19
HMC 610 boys 13-18

Required for September 1988 a well-qualified
graduate to teach

CLASSICS

throughout the School. There are four full-time clas-
sicalists within the Department, which has an excel-
lent reputation both within and without the school.
In making this appointment there is some prefer-
ence for a candidate with experience, but the post is
also suitable for a recent graduate keen to begin
teaching in a department of high academic stan-
dards.

KCS salary scale above DES scale. Possibility of
school accommodation.

Applications should be addressed to the Head Mas-
ter and include a full curriculum vitae as well as the
names and addresses of two referees. Further
particulars of the post may be obtained from the Head
Master's Secretary, King's College School, Wimble-
don Common, London SW19 4TT. (01-947 9311).

THE HABERDASHERS'
ASKE'S SCHOOL
ELSTREE, HERTS., WD6 3AF.

Required for January 1988

HEAD OF
COMPUTING

There are excellent facilities for computing,
and the post offers good opportunities for the
development of the subject within the school
as a whole.

Salary based on, but above, the Baker scale,
with London allowance, and with incentive
allowance appropriate to age and experience.
Assistance is given with relocation expenses.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

Computer Studies

Other Assistants

**GLOUCESTERSHIRE
NATHAN CASTLE
SCHOOL**
Cirencester, Glos GL7 3NQ
Independent Bursar, 100
girls aged 11-19.
Required as term as possible
a full-time or part-time
teacher of English and
Mathematics. Willingness
to help with extra-curricular
activities would be an advan-
tage. Small classes. Accom-
modation available.
Apply with c.v. and names
of two referees to the Head-
master, 1191111 182024

Economics & Business
Studies

Other Assistants

**BRIGHTON
RODEAN SCHOOL**
Brighton BN2 5RQ
Required for January 1988 a
qualified graduate to teach
part-time (1/2 time) in the
Department of Economics and
Business Studies. The school
has its own salary scale
and offers a very attractive
benefit package. Further
details from the Headmaster,
121451 182024

**WORCESTERSHIRE
KING'S COLLEGE SCHOOL**
Worcester, Worestershire
Required for January 1988 a
graduate to teach Geography
and History. The school has
a strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

English

Other Assistants

**SOUTH CROYDON
WHITFIELD SCHOOL**
Wokingham, Hants RG40 2JL
Required for January 1988 a
graduate to teach English and
History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

Geography

Other Assistants

**EAST SUSSEX
MAYFIELD COLLEGE**
Mayfield, East Sussex
Required for January 1988 a
graduate to teach Geography
and History. The school has
a strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

**LONDON SW7
QUEEN'S GATE SCHOOL**
London SW7 5JL
Required for January 1988 a
graduate to teach Geography
and History. The school has
a strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

MORRISON'S
ACADEMY
TEACHER OF GEOGRAPHY

A reallocation of duties means that there will be a
vacancy within the Geography Department from
11 January, 1988. The person appointed should be able to
contribute to the teaching of Geography across all
secondary school classes. Plans are currently in hand to
develop Standard Grade courses while large numbers
take Geography at Higher Grade and for the Certificate of
Sixth Year Studies.
Staff in the school are expected to support
co-curricular activities and it may be possible to involve the
successful candidate in the life of a boarding house.
Salary will be at the appropriate point on the Scottish
Teachers Salary Scale, to which is added a Morrison's
element, and applicants must be registered or eligible for
registration, with the General Teaching Council.
Letters of application and curriculum vitae should
be sent with the names of two professional referees by
30 October to the Rector, Morrison's Academy, Crieff,
Perthshire, PH7 3AN.

THE KINGSLEY SCHOOL,
LEAMINGTON SPA.
TEL: (0926) 25127

G.S.A. Independent day/
boarding school
427 pupils, aged 4-18 years.
Required for January, 1988, a good honours
graduate to share in the teaching of Geo-
graphy throughout the senior school up to
and including 'A' level. This is a part-time
post of approximately half-time table.
Salary: Baker Main Scale.
Please apply in writing to the Headmistress,
The Kingsley School, Beechcroft Avenue,
Leamington Spa, CV32 5RD, with cur-
riculum vitae, names, address and tele-
phone numbers of two professional
referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

Home Economics

Other Assistants

**SURREY
ST. CATHERINE'S SCHOOL**
Dorking, Surrey
Required for January 1988 a
graduate to teach Home Economics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

Mathematics

Other Assistants

**GLOUCESTERSHIRE
ST. PETER'S SCHOOL**
Gloucester, Gloucestershire
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

INDEPENDENT
EDUCATION

Other Assistants

**GLOUCESTERSHIRE
ST. PETER'S SCHOOL**
Gloucester, Gloucestershire
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

**MERSEYSIDE
BIRKENHEAD SCHOOL**
Birkenhead, Merseyside
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

**SURREY
ST. CATHERINE'S SCHOOL**
Dorking, Surrey
Required for January 1988 a
graduate to teach Home Economics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

**CROYDON
CROYDON HIGH SCHOOL**
Croydon, Surrey
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

**SURREY
ST. CATHERINE'S SCHOOL**
Dorking, Surrey
Required for January 1988 a
graduate to teach Home Economics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

**SHROPSHIRE
ST. ALBAN'S SCHOOL**
Shrewsbury, Shropshire
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

**SURREY
ST. CATHERINE'S SCHOOL**
Dorking, Surrey
Required for January 1988 a
graduate to teach Home Economics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

INDEPENDENT
EDUCATION

Other Assistants

**GLOUCESTERSHIRE
ST. PETER'S SCHOOL**
Gloucester, Gloucestershire
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,
Co. Durham, DL12 8UN (0833-37119)
H.M.C.: Independent ex D.G.

Boarding and Day (500 Boys)
150 in Vth Form (including girls)

Required for April 1987 a graduate

Mathematician

to join a department of five to teach throughout the
school up to 'A' Level.

It is expected that the successful candidate will be pre-
pared to make a significant contribution to extra-cur-
ricular activities.

Further details can be obtained from:
The Headmaster,
Barnard Castle School,
Co. Durham,
DL12 8UN
or ring 0833-37119.

THE MARY HARE
GRAMMAR SCHOOL
A Graduate
Mathematician

Required for January 1988, or sooner if possible, a
graduate mathematician at this residential sec-
ondary school for academically able hearing-impaired
children. This school is the national grammar school
for deaf children and all pupils are prepared for
G.C.S.E. and 'A' level examinations.
Salary would be negotiable according to experi-
ence. Teachers may undertake extra duties in return
for which they receive either free residence or an
additional allowance.
A qualified teacher of the deaf would be preferred
but a non-qualified applicant could become qual-
ified by in-service training if appointed.
Further details may be obtained from the school.
Intending applicants should send a detailed cur-
riculum vitae and the names and addresses of two
referees to: The Principal, Mary Hare Grammar
School, Arlington Manor, Newbury, Berkshire,
RG16 9BQ. Tel: 0635 248303.

South Hampstead High
School GPDST,
3 Maresfield Gardens,
London NW3 5SS.

Required in January 1988, on
enthusiastic graduate to teach
Mathematics throughout the school to
Advanced level. The school is highly
selective, with a Sixth Form of over
140, and runs 3 Advanced level
mathematics courses. An interest in
Computer Studies would be welcome,
but is not necessary.
Apply in writing to the Headmistress
giving the names of two referees.

For further details please apply without delay
to the Headmaster's Secretary (01-207 4323).

INDEPENDENT
EDUCATION

Other Assistants

**GLOUCESTERSHIRE
ST. PETER'S SCHOOL**
Gloucester, Gloucestershire
Required for January 1988 a
graduate to teach Mathematics
and History. The school has a
strong tradition in these
subjects and offers a very
attractive benefit package.
Further details from the
Headmaster, 121451 182024

BARNARD CASTLE SCHOOL,<

ilea Working in Education

HAMMERSMITH & WEST LONDON COLLEGE

Principal

£29,568 inc. (Group B)

Applications are invited for the post of Principal which will become vacant on 1st January 1988. Maintained by the Inner London Education Authority, the College is responsible for a wide range of specialist and general courses, in a variety of disciplines. In departments spanning Building Crafts; Business & Professional Studies; Construction & Estate Management; English Studies; General Education; and Office Studies & Office Technology. Candidates should be suitably qualified and experienced with sound management skills and a commitment to equal opportunities policies. They must also possess breadth of vision to play a key role in advancing the work of the College in an effective and imaginative manner.

Further details and an application form are available from ILEA/PS/HE4, Room 2576, The County Hall, London SE1 7PB or telephone 01-633 7726. Closing date: 30th October 1987.

Inner London Education Authority

ILEA IS AN EQUAL OPPORTUNITY EMPLOYER

Clarendon College of Further Education

Principal

Candidates (male or female) should be graduates or have equivalent professional qualifications together with appropriate teaching, organisational and administrative experience. The College has five departments: General Studies, Business, Professional and Management Studies, Catering and Food Studies, Hairdressing, Fashion and Science, Adult and Community Education. For salary purposes the College is placed in Group 6. Further details and application forms are available from the Chief Education Officer, Further Education Group, at County Hall, Tel: Nottm. (0602) 823312 or 823271. Closing date 30 October. Please quote ref: F12. An Equal Opportunity Employer.



Nottinghamshire County Council
County Hall, West Bridgford
Nottingham NG2 7GP

Dudley College of Technology

Suitably qualified, energetic candidates required for the following posts to commence on or before 1st January, or as soon as possible thereafter:

Principal Lecturer - Division of Management and Small Firms Business (£1784 - £19485 (max) - £18586)

Encompasses Head of Division responsibility for a range of provision - IPC AND IIM courses, BTSC Cert. in Business Admin. and Supervisory Studies Cert. (NEBSS); Trades Union Studies (TUC Approved); Small Firms Business including MSC sponsored short full-time courses in Self Employment, Mini-Business and the Management Extension Programme.

Senior Lecturer - Division of Science and Mathematics (£12618 - £14820)

Involves senior responsibilities within a division having a large programme of Science and Mathematics subjects at GCSE, OCE 'A' and 'AS' levels by FT, PT and Open Learning (Flexistudy) and a developing range of BTSC courses.

Lecturers I (£8843 - £13650)

- Physical Education - to teach on a developing range of sports studies, leisure and recreation courses, including GCSE and OCE 'A' levels.
- Travel and Tourism - to teach on BTSC Diploma, CPVE, YTS and related courses.
- Construction - to teach on a range of BTSC, C&G and YTS Construction Schemes.

Application forms and further details from The Principal, Dudley College of Technology, The Broadway, Dudley, West Midlands, DY1 4AS (tel. Dudley (0894) 83888).

DUDLEY Metropolitan Borough Council
Equal Opportunity Employer

PREPARATORY SCHOOLS

ROXBURGHSHIRE

ST. MARY'S SCHOOL, Melrose, Roxburghshire (Co-educational preparatory school). J.A.P.S.1. Required for January or April 1988, enthusiastic qualified teacher for a class of 24 year olds. A willingness to participate in the development of a co-educational boarding school. A willingness to accept a wide range of duties. Ability to handle a wide range of subjects. Salary £12,500 - £15,000. Apply to the headmaster, 1192543 605724

SURREY

Required for January 1988 experienced infant teacher. Apply in writing, enclosing curriculum vitae and the names of two referees to the Headmaster, Virginia Water Prep School, Virginia Water, Surrey GU25 4AU. (18920) 203724

SURREY

ROYAL RUSSELL JUNIOR SCHOOL, Cobham Lane, Croydon CR9 8BQ. Independent Co-educational, boarding and day school. 145 pupils 4-11 years. Required for January 1988 a dedicated and experienced teacher of general subjects to be responsible for a class in the 10-11 year age group. Experience in French would be an advantage, and ability to coach boys' games essential. It is hoped that the post would be residential. Salary according to experience. Non-residential letters of application with full CV and details of two referees as soon as possible please to the Headmaster. (20916) 203724-116

WESTSUSSEX

TEACHER. Required for January 1988 in busy co-educational boarding school. Must be qualified and experienced to teach 7-8 year olds. Knowledge of half-term activities essential. Excellent single or married accommodation. Salary £12,500 - £15,000. Please reply in writing with curriculum vitae, together with names, addresses and phone numbers of two referees to: Mr. A. R. Rogers, Headmaster, Sussex Hill, Crawley, Sussex, BN1 1AA. (121221) 203764

Colleges of Further and Tertiary Education

HEADS OF DEPARTMENT

HAMPSHIRE

THE SOUTH COVING COLLEGE OF FURTHER EDUCATION. Required for 1st January 1988. The vacancy occurs as a result of the resignation of the Head of the Department of Business and Professional Studies. The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, South Coving College of Further Education, 1192543 605724

HEADS OF DEPARTMENT

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

PERCIVAL WHITLEY COLLEGE OF FURTHER EDUCATION

TEACHING RESOURCES MANAGEMENT Ref ED/088

The College (group B) is the single FE provider covering the whole of Calderdale and is seeking an appropriately qualified and experienced person with energy, imagination and commitment to join its staff. The successful candidate will be responsible for the following key areas of the College:

- Co-ordination of staff, rooming and financial resources through the management of a team of currently ten Group Managers.
- The responsibility will be to review, revise and, if necessary, initiate systems, policies and procedures as well as team leadership.
- The College is a multi-breed in terms of specialisms and continuing community education provision. It is in the process of developing a new range of courses to complement its traditional FE activities.

Application forms and further details (see please) from the Principal, Percival Whitley College of FE, Farnley Road, Leeds LS21 1JH. To whom completed forms should be returned by 22 October 1987.

Keighley Technical College

FACULTY OF BUSINESS AND GENERAL EDUCATION

HEAD OF FACULTY (GRADE 5)

Salary Scale £18,174 - £20,181

This is a key post created as a result of a major re-organisation designed to take the College forward into the 1990's. The College provides a stimulating environment from which it aims to serve the Community and from which it receives generous support. The post offers an excellent opportunity for an ambitious and highly motivated educationalist who enjoys working within a Management Team.

Applications are invited from suitably qualified persons experienced in one or more of the areas of work covered by the Faculty. An awareness of funding agencies is essential.

SENIOR LECTURER

AS CO-ORDINATOR FOR SPECIAL NEEDS

Salary Range £12,615 - £14,820

Applications for this new post are invited from experienced teachers in the field of Special Educational Needs in further education and with adults. The successful candidate must have a substantial background in curriculum and staff development, and be able to demonstrate a positive commitment to equal opportunities policies.

SENIOR LECTURER

IN STAFF AND CURRICULUM DEVELOPMENT (TEMPORARY)

Salary Range £12,615 - £14,820 (pro rata)

Applications are invited from suitably qualified, experienced and motivated staff to undertake this demanding post, while its holder is on secondment within the Authority. The post demands high organisational skills, management ability to work with a large Grant-Related In-Service Programme and significant previous experience - particularly in staff development.

The postholder will be responsible to the Vice Principal (Academic) and will teach in an appropriate area of work.

The post is temporary and will terminate on 31 August 1988.

RESEARCHER:

LOCAL COLLABORATIVE PROJECT

We need someone to assist in the conduct of research into Information Technology in Medical Centres. This post is full-time and terminates at the end of February, 1988.

Application forms and further details for all the above posts are available from Miss D. Whitham, Keighley Technical College, Cavendish Street, Keighley, BD21 3DF. Telephone Keighley 665421. Closing date: Wednesday 21 October, 1988 (for all posts).

This College operates an extended College year agreement.

The College is part of a racially and culturally diverse community. It is committed to a positive recognition of that diversity in all aspects of its activity and as an Equal Opportunities employer welcomes applications from candidates of any age, sex, race or disability unless otherwise stated.

Bi-lingualism will be considered an advantage.

IK KEIGHLEY TECHNICAL COLLEGE
Cavendish Street, Keighley BD21 3DF
Tel: Keighley 665421

STAMFORD COLLEGE

HEAD OF DEPARTMENT OF BUSINESS STUDIES AND TECHNOLOGY STUDIES Grade III

Stamford College proceeded from a Group 3 to a Group 4 college with effect from 1st September 1987. As a result of a restructuring within the College a vacancy now exists.

A suitably qualified person is required who has a Business Studies background with a specialism in Information Technology.

Further particulars and application forms are available from the Principal, Stamford College, Drift Road, Stamford PE9 1XA. Closing date for applications is 30th October 1987.

Lincolnshire County Council

COLLEGES OF FURTHER EDUCATION

APPOINTMENTS

BUCKINGHAMSHIRE

AYLESBURY COLLEGE
Oxford Road, Aylesbury
HP81 8PD

Tel: 0298

DEPARTMENT OF BUSINESS STUDIES

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies. The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS to teach at least two OCE 'A' level courses in Business Studies.

The successful candidate will be responsible for the delivery of a range of vocational courses, including: Business Administration, Office Management, and Secretarial Studies. The successful candidate should have a minimum of 5 years' experience in the above field, and a degree of responsibility for the management of a team of staff. Salary £12,500 - £15,000. Apply to the Principal, Aylesbury College, Oxford Road, Aylesbury, Bucks. HP81 8PD. (18920) 203724

LECTURER GRADE I IN TWO POSTS

KINGSTON POLYTECHNIC

Lecturer II/Senior Lecturer in Primary Teaching Studies (Art)

Lecturer II/Senior Lecturer in Physical Science

Lecturer II in Biological Science (Fixed term appointment)

The Faculty of Education wishes to recruit for January 1988:

- (i) A Lecturer with a specialist qualification in ART and recent experience in Schools.
- (ii) A Lecturer with a specialist qualification in PHYSICAL SCIENCE and recent experience in Secondary Schools.
- (iii) A Lecturer with a specialist qualification in BIOLOGICAL SCIENCE and recent experience in Schools for a 2 year appointment.

The persons appointed will teach on the BEd Honours and PGCE courses, and this will involve school-based work with students.

Further details and application forms may be obtained from the Personnel Department, Kingston Polytechnic, Penrhyn Road, Kingston Upon Thames, Surrey, KT1 2EE. Telephone 01-549 1366 extension 2153 quoting Ref: J203/TES. Closing date: 21st October 1987.

We are an Equal Opportunities Employer

53448

KILBURN POLYTECHNIC

Prory Park Road, Kilburn NW7 7UJ

DEPARTMENT OF ADULT AND CONTINUING EDUCATION

LECTURER I ACCESS COURSE (ARTS)

(POST NO. 87/24)

Required from 1st January 1988 to teach two of the following subjects: History, Philosophy or Literature on an Access Course and on other courses in the department. The department is currently running a very successful Access Course teaching Social Sciences. It is planned to expand this provision by offering the Arts subjects indicated as an alternative to the Social Science elements of the Course. Knowledge and ability to teach mature black students is an essential requirement. Candidates must demonstrate an understanding of and commitment to anti-racist and gender equality policies.

Salary: £8843-£11865 - plus London Allowance of £2125

Brent is an equal opportunities employer. Applications are welcome from candidates, irrespective of race, nationality, ethnic or national origin, age, marital status, gender, sex, disability, gay men and from disabled persons.

Brent is fully committed to Multi-Cultural Education.

Further particulars and an application form, returnable within 14 days of this advertisement may be obtained from the Principal on receipt of a S.A.E.

52449

London Borough of
BRENT

NATIONAL BAKERY SCHOOL

LECTURER III/ IN BAKING TECHNOLOGY

£9,810 to £14,871/£8,058 to £13,080
(Pay award pending)

Applications are invited from those suitably qualified to teach both the theory and practical aspects of a wide range of subjects. Particular emphasis will be placed on test baking and cereal testing.

Applicants should hold at least Full Technological Certificate or Diploma in Baking plus relevant commercial experience in this field.

Application forms and further details are available from the Personnel Department, South Bank Polytechnic, Borough Road, London, SE1 0AA. Telephone 01-528 3512 (enquiries service 8.00 am to 6.00 pm)

Please quote Ref: ASNB7

Closing date: 23rd October, 1987

An Equal Opportunities Employer

South Bank
Polytechnic

Teaching for tomorrow
in the heart of London

COLLEGE OF FURTHER & TERTIARY EDUCATION

(continued)

NOTTINGHAMSHIRE COUNTY COUNCIL

CLARENDON COLLEGE OF
FURTHER EDUCATION
FELHAM AVENUE, NOTTINGHAM
NG11 1JL
LECTURER II (3 posts)
Grades 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 1180, 1181, 1182, 1183, 1184, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1194, 1195, 1196, 1197, 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333, 1334, 1335, 1336, 1337, 1338, 1339, 1340, 1341, 1342, 1343, 1344, 1345, 1346, 1347, 1348, 1349, 1350, 1351, 1352, 1353, 1354, 1355, 1356, 1357, 1358, 1359, 1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 1371, 1372, 1373, 1374, 1375, 1376, 1377, 1378, 1379, 1380, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1413, 1414, 1415, 1416, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453, 1454, 1455, 1456, 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1467, 1468, 1469, 1470, 1471, 1472, 1473, 1474, 1475, 1476, 1477, 1478, 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1517, 1518, 1519, 1520, 1521, 1522, 1523, 1524, 1525, 1526, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1534, 1535, 1536, 1537, 1538, 1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1570, 1571, 1572, 1573, 1574, 1575, 1576, 1577, 1578, 1579, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 1590, 1591, 1592, 1593, 1594, 1595, 1596, 1597, 1598, 1599, 1600, 1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1703, 1704, 1705, 1706, 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1714, 1715, 1716, 1717, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 1752, 1753, 1754, 1755, 1756, 1757, 1758, 1759, 1760, 1761, 1762, 1763, 1764, 1765, 1766, 1767, 1768, 1769, 1770, 1771, 1772, 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782, 1783, 1784, 1785, 1786, 1787, 1788, 1789, 1790, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1799, 1800, 1801, 1802, 1803, 1804, 1805, 1806, 1807, 1808, 1809, 1810, 1811, 1812, 1813, 1814, 1815, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880,

